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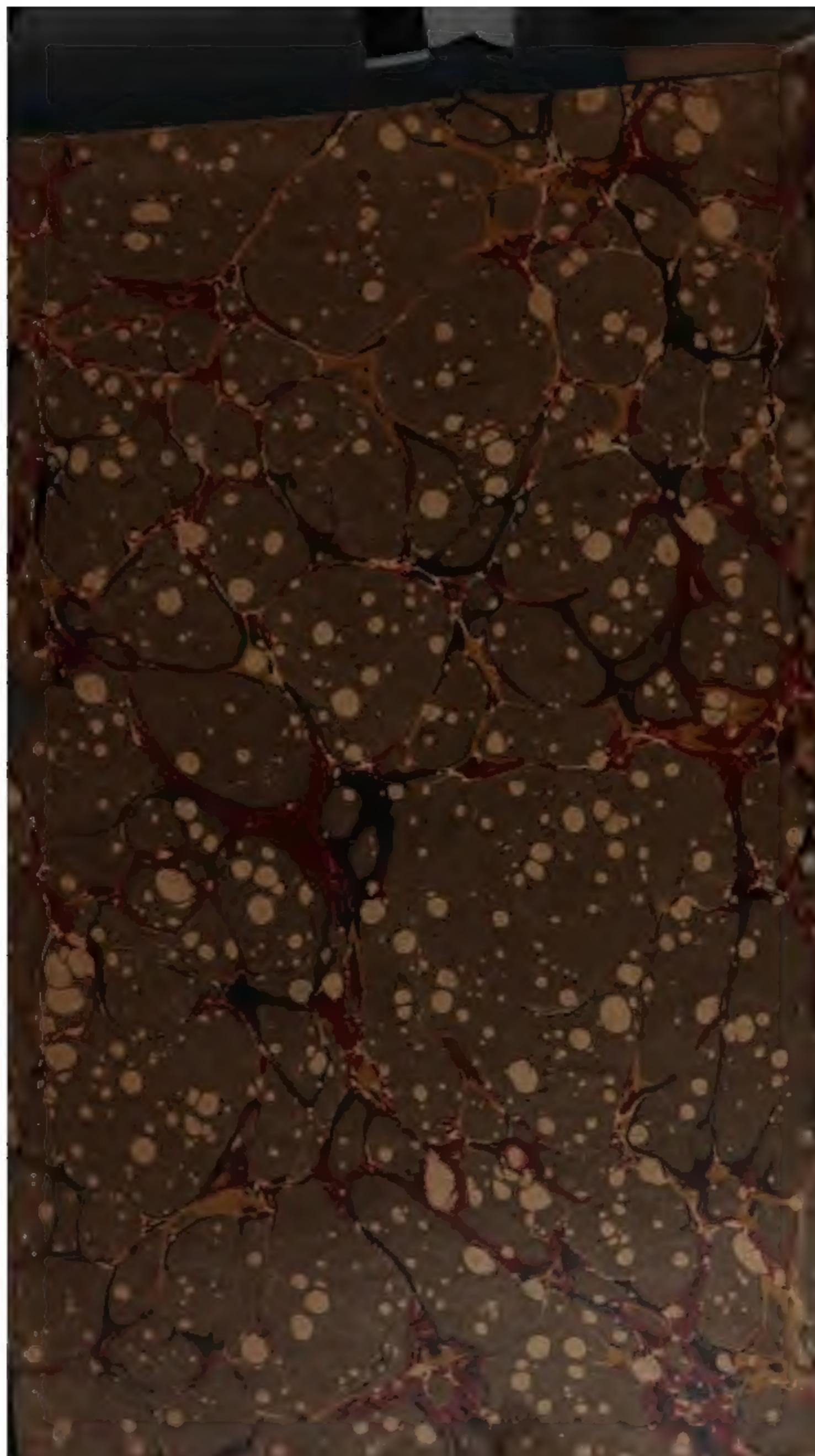
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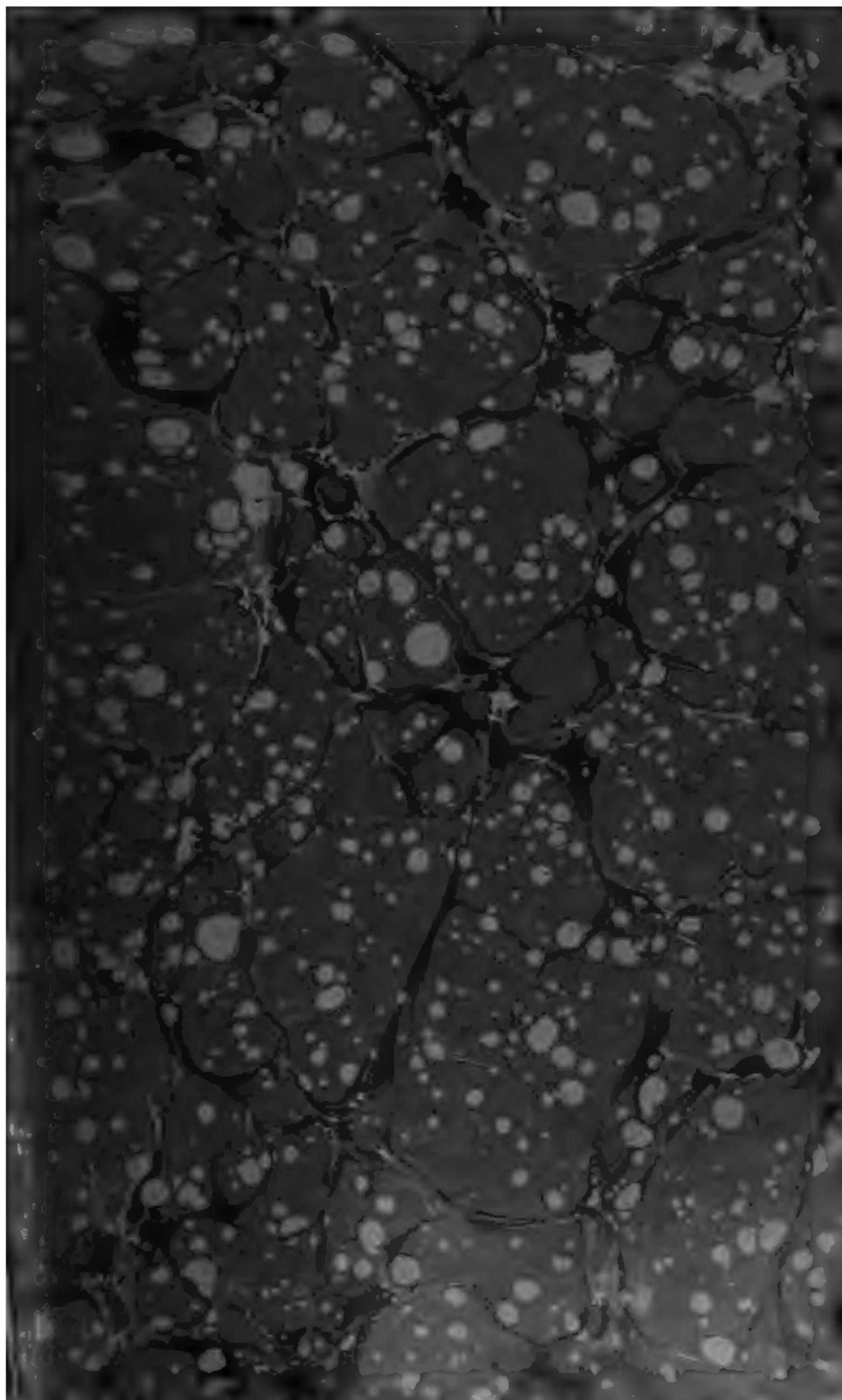
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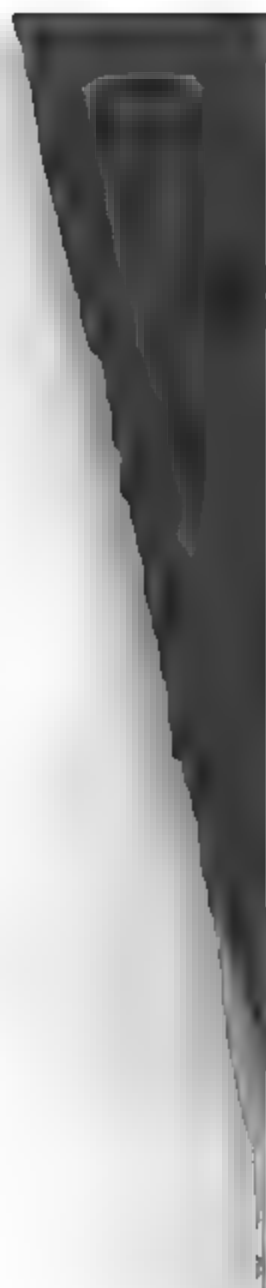














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THE THEORY OF BUSINESS PROFITS.

PRESIDENT WALKER invites criticism of his theory of business profits,\* and, presumably, of the theory of wages it is designed to supplement. Responding to the invitation, I wish to present some reasons why, in my opinion, both theories must be rejected as untenable. As Professor Alfred Marshall has expressed a general agreement with Mr. Walker, I shall take the liberty of examining, in conjunction with Mr. Walker's views, several passages of *Economics of Industry* bearing on these subjects.

The mode by which Mr. Walker seeks to maintain his theory of the manager's earnings is certainly marked by great ingenuity. Much that he says is undoubtedly sound and just. In large part, it is a contention that high business capacity is a rare gift, and that the possessors of this gift, being able to perform highly useful service in production, are able also to obtain large rewards for their labor. This would be to apply to busi-

\* See *Quarterly Journal of Economics*, April, 1887, p. 288.

ness management the familiar law of monopoly wages, coupled with the principle that the highest success in every calling is due to something in the nature of a personal monopoly, as against the general body of competitors in the same business. If this had been all, the adherents of the old views would find little ground for criticism. Here, if anywhere, they might be expected to agree with Mr. Walker; for here certainly is a case of wages depending on production and a case of labor rewarded out of product rather than out of previous savings. But the agreement, I am sorry to say, must be a qualified one, extending not much beyond the fact that the employer's personal wages are, by as much as they exceed ordinary wages, the result of monopoly. As to the elements that constitute the monopoly, Mr Walker's theory will hardly win general acceptance. His view is that the dearth of natural ability is everything, or so nearly everything that the other elements may safely be neglected. He argues as if the born manager, on coming of age, had only to whistle the proper note, in order to have all the requisites of production laid at his feet. On this point, I can but think that the general verdict will be more nearly in agreement with Professor Marshall, in holding that the necessity of having capital and training is a much more influential element in constituting the monopoly than the lack of men with the requisite talent.\* For myself, I think the "captain of industry," now that he has found recognition, is in some danger of getting overdone. I cannot forget that, for all but the highly gregarious industries,—which, after all, do but a small part of the world's production,—this splendid captain is and must remain a rather mythical personage. I rejoice to think that, for the most part, the business of production, even in some gregarious industries, can be very well man-

\* *Journal of Economics*, July, 1887. I understand thus Mr. Marshall's remark that, at a rough guess, he should attribute a tenth part of the extra gains of the successful business man to rent of special ability.

aged by men who have average ability, plenty of common sense, the requisite training, and sufficient energy to devote themselves unflaggingly to the work. Not at all because I wish to disparage the great captain, but because I think the service he does for society consists mainly in the example he sets of improved organization of labor. The world needs inventors there as in other things. When the best mode of conducting the business is demonstrated, a lower grade of talent may well enough suffice for safe and successful management.

It is probable that there are thousands of men born with all the natural gifts required for successful management, who nevertheless fail to get control of business enterprises, solely for lack of the necessary training and capital. Both of these are extremely hard to get. There is no training school for business men but actual business. A man who has no capital cannot even try the experiment of business in a small way, in order to prove his ability. He cannot ask men of capital to put him in charge of their business until he has had training and has proved his capacity and, I will add, his honesty. He cannot borrow, because he has no security to offer for the repayment of the loan. The only course open to him in most cases is to work hard and save hard until he can command capital of his own. This is an ordeal that natural ability for management on the large scale does not help men to face successfully. It demands rather plodding patience and severe self-denial. Even with these, the chances are heavily against great success. Partly by sustained exertions, partly by good luck, the man who begins life without means or backing does sometimes climb to the control of large enterprises; but this, I fear, is the happy event that comes only to few. We hear much of these few, but the history of those who fall by the way is not written. This is my opinion—I admit it is only an opinion—as to the character of the business man's monopoly.

As to the mode by which this monopoly brings its special gains to those who hold it, there will be, I think, a very decided rejection of nearly all the reasoning that Mr. Walker urges in behalf of his theory of business earnings. Let us, in the first place, consider the proposition that the "no-profits" employer regulates the price of each commodity, on the same principle as that on which no-rent lands regulate the price of wheat. One naturally asks why the no-profits employer should have this function, seeing that there are always in every business, as Mr. Walker himself tells us, some employers who are not only making no profits, but are making losses. The products of these losing employers are continually in the market. Why should they not regulate the price, rather than the products of employers who are doing indefinitely better? In the case of land, we take the poorest in steady use as the regulator of price. If we are to have the same rule as regards employers also, let us have it, and take the least efficient employers as the regulators of prices. Mr. Walker seems to me to shrink from applying the principle he announces. What should we think of Ricardo, if, in developing his theory of rent, he had "thrown out of account" several of the poorest grades of land in constant use, in order to find the basis for prices and rent?

But, even if the lowest in the scale be taken, we come upon great difficulties in the application of the principle. How is it to apply in the case of the extractive industries, such as farming and mining? We should have, according to this new doctrine, two descending scales of productiveness, one due to differences in the natural agents, the other due to the varying capacity of employers. Both of these (the foot of the scale in each case) are supposed to be operative in determining the price. The cost of production of that part of the supply which is produced at the greatest disadvantage settles the price of the whole. But what part, on this theory, is produced at the greatest

disadvantage? Unless, by happy chance, the lower end of the one scale coincides with the lower end of the other, unless the least efficient employers have the least productive lands, we lose our regulator of price and our base for reckoning rent. If the least efficient employers should happen to have farms and mines somewhat above the poorest, the consequences would be extremely awkward. The poverty of the poorest lands might be counterbalanced, to an indefinite extent, by the superior business capacity of those tilling them; and the inferior business capacity of the least capable farmers would be offset by the natural advantages of their land. If each of these is to operate in fixing the price, how are they to combine their effects? The produce that comes under the influence of the one escapes the effects of the other. Where shall we look, on this theory, for "that portion of the supply which is produced under the greatest disadvantage"? Also, in this case, how shall the law of rent be stated? How is the "rent of ability" to be distinguished from the rent of the land? On these questions, Mr. Walker gives us no clear information. In discussing the law of rent in his general treatise, he dwells only on differences of soil and situation, as causing one farmer to have larger returns than another. Incidentally, indeed, in connection with another subject, he makes a remark, which, if taken literally, can only mean that, in his theory, all farmers are to be regarded as of the same grade of ability, and all of the "no-profits" class! Comparing the special gains of the successful business man with the rent of land, he says,—"just as the cultivator of soils of the better class has a surplus left in his hands after paying wages for labor and interest for capital employed, which surplus, called rent, goes to the owner of the soil."\* If it is assumed that the whole surplus above wages paid for labor and interest for capital goes to the landlord, of course that would obviate the difficulties I have mentioned: all farmers are then of the "no-profits"

\* Walker, *Political Economy*, § 284.

grade. But, if that be assumed, what shall we say of the assumption?

Let us now examine the grounds on which the least efficient employers in every industry are credited with the special function of settling the price of the product, as the poorest natural agents do in the extractive industries. In the case of the natural agents, the reason is clear and convincing. As poorer sources of supply have to be resorted to, in the industries subject to the law of diminishing returns, the value of the product rises. But this is because, and only because, other industries are free from the law of diminishing returns. If all industries were subject to that law, neither value nor price would be affected by it, except so far as the decline of returns happened to be more or less sudden in some industries than in others. Wheat, for example, does not rise in value as compared with barley or with dairy products, when inferior soils have to be resorted to; nor does it necessarily rise in value as compared with coal or iron ore, since the same law of increasing cost is encountered in adding to the production of these things. But it does rise as compared with cloth or with shoes or any other manufactured article, since in manufactures there is no law of diminishing returns.

But the differing efficiency of employers is a fact common to all industries, and, by Mr. Walker's own assumption, tapers off to the same precise vanishing point of "no profits" in all. How then, I ask, shall it affect the value or the price of any commodity? If the presence of the "no-profits" employer tends to raise the value of any one product, it must have a precisely similar effect on the value of every other product. If it makes the production of wheat more costly, it also makes the production of cloth more costly in the same degree. It cannot therefore affect the exchanging proportions of wheat and cloth. Neither can it affect prices (*i.e.*, the exchanging propor-

tions of gold and other things), since in the production of gold the "no-profits" employer is present, and must be as potent in affecting the value of the product as he is in every other case. In other words, the presence of inefficient employers in all industries has no more to do with determining the prices of commodities than has the presence of dishonest employers, or (if I may be pardoned the levity) employers with red hair. In saying this, I have no desire to question the fact that important economic results would flow from a dearth of efficient business men. I merely contend that those results must be sought for in another direction than that suggested by Mr. Walker.

The natural effect of incompetence, and the only direct effect, one would suppose, would be small reward or even loss for the incompetent person. Mr. Walker apparently asks us to believe that the effect of incompetence, down to the vanishing point of profits, spends its force on the income of the employer, and beyond that point takes effect on the buyer of the product. Just why it should not spend its whole force on the employer's revenue, changing, if need be, "no profits" into losses, he does not explain. What renders this portion of Mr. Walker's theory all the more strange is that he does not steadily adhere to the assumption that the presence of the "no-profits" employers is a necessity of business. At times, he speaks as if they simply forced themselves, unneeded and unbidden, into the management of business. He cautions us against various courses that tend to give them an opening, and against the maudlin sentiment that deters us from casting them out and punishing them whenever, by reason of their financial embarrassments, the chance offers itself. Why not also caution the community against allowing the poorer grades of land to be cultivated? There would seem, on his theory, to be as good reason for the caution in the one case as in the other. If the least competent employers regulate prices, then prices would be

made higher and not lower by driving them out of business, just as the price of food would be made higher and not lower by punishing men for cultivating poor grades of land. Mr. Walker is thoroughly aware that it is not open to anybody to force up the price of food and the rent of land by needlessly bringing into cultivation land poorer than any hitherto in use. Why should he argue as if the corresponding feat were possible, when incompetent employers "force themselves into the control of business and maintain themselves there at the expense of the community"?

Probably Mr. Walker would admit that his proposition as to the source of the earnings of successful business men must stand or fall with his theory as to the price-regulating function of the "no-profits" business man. Yet the proposition that the successful business man creates by his own exertions the gain he makes is so plausible, and would be so important if it were true, that we may advantageously consider it for a few moments by itself. I observe that in *Economics of Industry* the proposition is limited to strictly productive business. Mr. Walker, on the other hand, applies it to all sorts of business in which profits are made. I believe that in either form the proposition is quite untenable. In the mere statement of it there is, it seems to me, an attempt to ride two horses that face in opposite directions. Professor and Mrs. Marshall tell us:—

If a manufacturer can improve the method of carrying on his business so that the work of four hundred men produces as much as that of five hundred did previously, then he will gain an addition to his earnings of management equal to the wages of one hundred men. Thus, the earnings of management of a manufacturer represent the value of the addition which his work makes to the total produce of capital and industry.—*Economics of Industry*, p. 142.

This, Mr. Marshall tells us, is to be understood in a literal sense; and, so understood, Mr. Walker adopts it

as expressing precisely the same view he himself holds. Yet both authors are very emphatic in maintaining that every increase in the number of capable business men tends to lower the earnings of management, Mr. Walker going so far as to say that, if the managers of the best grade were "numerous," their earnings, under free competition, would fall to *nil*. Now, each of these views is intelligible; and for each, by itself, some sort of case may be made out. But the attempt to combine the two as a law of manager's earnings leads, in my opinion, to something not far removed from absurdity. For, if a good manager can create as much wealth as one hundred men when good managers are few, he can do the same when good managers are numerous. If his earnings are to be the value of the addition his work makes to the produce of capital and labor, how can mere increase of the number of men capable of thus adding to the produce of capital and labor diminish his earnings? Mr. Marshall, in accounting for the decline, cites, as analogous, the decline in the wages of skilled labor as the number possessing the skill increases. But there is this fundamental difference between the two cases, which renders analogy between them impossible for the purpose in hand. Skilled labor has specific products of its own, which fall in value as the supply of them is increased. But management has no distinct products of its own. All production needs management, and all products cannot fall in value. How, then, I repeat, shall we hold that the earnings of management correspond to the wealth created by the manager's own exertions, and yet at the same time hold that these earnings may fall indefinitely, merely on account of increase in the number of capable managers?

In form of statement, at least, Mr. Walker's theory is a little different at this point from Mr. Marshall's. Mr. Walker treats rather of differences of profits than of profits as such. He would apparently deny the possibility

of profits under free competition, in circumstances that should leave no grounds for differences of profit. In the hypothetical case (with which he begins his exposition) of a small and exclusive class of business managers, "each the precise economic equivalent of every other," he has no suggestion to offer as to the amount of their earnings apart from the needless and highly uneconomic assumption of a combination to "fix a standard for their own remuneration." Yet, if the earnings of management coincide with or represent wealth created wholly by the manager's own exertions, why should the smallness of the managing class or the sameness of their abilities interfere with their getting what they have created? Why should they combine to fix their gains arbitrarily? Does the suggestion imply that by combination they might extort more than they create? or that, without combination, they might lose part or even all of what they create? Apparently, the latter is Mr. Walker's view; for he tells us that, if managers of equal ability became so numerous as to make effective combination among them impossible, the earnings of management would disappear. He frankly avows that, on his theory, under equality of advantages and freedom of competition, he finds "no natural stopping-place" for the fall of business earnings until they reach *nil*. Apparently, the "no-profits" employer is regarded as the necessary buffer to check the fall of profits by keeping up the values or prices of all commodities, a function of which, as we have already seen, the unfortunate man is hardly capable.

It would seem, then, that Mr. Walker's theory is, in reality, not a theory of manager's earnings at all, but a theory of the differences in managers' earnings. By the ingenious but, as I believe, entirely fallacious use of the "no-profits" manager, it is made to wear in part the appearance of a primary law of distribution, whereas it is at best but the necessary appendage to such a law, stating

the allowance to be made for human inequalities in the working of the law. To claim any more for it is much as if one should attempt to develop a law of wages by calling the amount earned by the least efficient laborers "unity" or "*nil*" or "no wages," and showing that every laborer of higher efficiency receives an excess of wages above unity or *nil* or no wages, representing the surplus of wealth he creates over and above the amount produced by the lowest grade of laborers. In fact, by changing necessary words, a very readable article on the "Source of Wages" could be made out of Mr. Walker's article on the "Source of Business Profits." Such a treatment we should scarcely accept as leading to a satisfactory law of wages; yet, in my opinion, it would have somewhat better claims to acceptance than the theory under review.\*

In other words, I cannot but regard as unreal and misleading the analogy assumed by Mr. Walker between earnings of management and rent of land. Rent could have at most an analogy to differences of earnings; for the basis of rent is not production, but differences in production. The rewards of human exertion, on the contrary, are primarily for the whole service. If the service be the creation of wealth, and if the amount of wealth created is to be the measure of wages, then there can be no ground in reason for considering anything less than the whole amount created. To lay down individual creation of wealth as the law or the source of business profits, and yet hold that the principle extends only to the surplus over and above the amount created by some other man, is only to deal in contradictions. At most, as already remarked, such considerations could apply only to differences of profit.

\* Better, first, in that ordinary productive labor has usually a definite product for each laborer, whereas managing ability has not; better, secondly and chiefly, because it would take in the whole range of differences in wages instead of measuring upward from an arbitrarily chosen point considerably above the lowest returns, as Mr. Walker does in the case of business earnings.

Even as a rule of differences, Mr. Walker's theory could not be accepted without very extensive modifications. Men grow rich by producing much, but they also grow rich without producing anything. Some men are poor because they have produced little, but other men are poor in spite of having produced much. There is, in fact, but little connection between the production and the acquisition of wealth, in individual cases. Mere lucky trading, skilful speculation, taking advantage of the ignorance or the fears or the necessities of other men, corners, craftiness, and even knavery, are often much shorter roads to riches than actual production is. It might be a great comfort to our Vanderbilts, Goulds, and Fisks to be told that their gains represent wealth of their own creation,—if they could be got to believe it!

There is certainly, as Mr. Walker has said, a gain which no man loses; but that is not enough to justify his theory. He is bound to prove that all gain is of that description. So far as I can see, he asks us to take the mere fact of gaining as proof of creating. Not to gain appears to be his evidence of incompetency in producing: to gain large profits is his proof of large creative ability. But till the accidents, uncertainties, and tricks of trade can be got rid of, it would be extremely rash to take the making of gain as proof of anything but the making of gain. Whose exertions created the gain is a question needing other evidence for its determination. Similarly, as regards failure to win profits, we should need to know the causes of the failure before pronouncing the unfortunate man incompetent as a producer. It is, for example, a fair conjecture that in many cases the "no-profits" employer may have actually produced a large addition to the general wealth, but failed to realize it in exchange, owing to the mistakes or bad faith or misfortunes of others, or owing to any of the ten thousand mischances to which every business enterprise is liable.

Before leaving this part of our subject, I wish to point out that, even if Mr. Walker's theory of the earnings of management could be accepted as satisfactory, it would fall seriously short of filling the gap in his system to which Professor Henry Sidgwick called his attention. Mr. Sidgwick's very obvious criticism was that Mr. Walker had "supplied no theoretical determination whatever of the average proportions in which produce is divided between capital and labor." The whole return going to the side of capital is resolvable into Interest, Compensation for Risk, and Remuneration for the Labor of Management. Mr. Walker's theory relates specifically to the last of the three only; though, from the general tone of his treatment, it may perhaps be inferred that he includes the successful management of risk as one of the sources of business gains. However that may be, he certainly makes no attempt to supply a theoretical determination for the rate of interest beyond saying that it is "determined by the relation of supply and demand." He does, indeed, mention the tendency of interest to decline as countries grow older,—to become five per cent. where it has been eight, three per cent. where it has been five. He seems to hold that interest, as an element in distribution, is sufficiently accounted for by noting the rate and its changes. But this is as if a physicist should account for the pressure of the air by giving us the readings of his barometer. On the whole, it is no unfair criticism of Mr. Walker's theory at this point to say that it takes the rate of interest for granted. Further, when "interest is to be deducted," it would be necessary to know whether this means interest on perfect security or on ordinary mercantile security or on such security as the individual employer in each case happens to be able to offer, for interest varies in the same loan market with the character of the security. Also, we should need to know whether, in times of temporarily high interest, the laborers are to be charged at the high

rate on the whole capital of the country or only on the portion actually borrowed at the high rate.

Altogether, the residue theory of wages needs a good deal of clearing up in the region of interest and earnings of management before it can lay claim to completeness as a theory of distribution. It was apparently in order to provide some sort of economic bed for this theory of wages that Mr. Walker invented the "no-profits" theory of profits. When the whole work is done, it seems to me to be little more than a somewhat elaborate statement of the fact that what does not go to the other participants goes to the laborers. By simply transposing terms, the same method would yield an equally valid law of rent, or of interest, or of earnings of management.

It is not the least curious part of the whole system that the author should choose as the residuary legatee of industry precisely the claimant against whose right to the position there is a strong *prima facie* case. For if (to carry the figure a step farther than Mr. Walker carries it) the estate of production should some day go to the probate court, the valid claims upon it of the laboring class would be found, I fear, to be comparatively insignificant. Some slight liens many of them would have undoubtedly; but the great bulk of the estate would go, as a matter of course, partly to those who are entitled to receive rents, partly to those who have managed production, but mainly to those who own the capital. The laborers alone, of all the classes concerned in production, have had their services paid for and quitted, from week to week, during the long periods in which the commodities constituting the estate were being produced. As residuary legatees, they are without the shadow of a case. The very essence of receiving wages is a surrender of the right to appear as residual claimants.

Putting the same fact in another form, it is very clear that the laborers do not own the finished commodities

that come<sup>2</sup> forward for consumption from day to day. Neither have they, of their own, money enough to buy more than a small part of them. The goods are partly rent, partly profits; but, mainly, they only replace capital previously advanced. Some small part, I will admit, may represent wages earned, but not yet paid; though I fear that, if we take into account, as we are bound to do, the shop debts of the laborers, they would be found, as a class, to have nothing owing to them,—to have no lawful title to a residue or any other part of the commodities now awaiting the consumer. These sad and simple facts are of vital importance for the law of wages. They cannot be thrust out of sight or deprived of their significance by even the most skilful dialectics. And, to my mind, they are dead against Mr. Walker's theory,—so dead against it that one finds some call for self-restraint in soberly arguing the matter. Indeed, Mr. Walker himself seems to have felt the weight of the facts opposed to him. He tells us that wages are to be regarded as residual in certain "senses." He admits that in any particular case the employer is, by force of contract, the residual claimant.\* Yet he asks us to believe that wages, if not literally a residue, are at least determined precisely as if they were a residue; *i.e.*, by "deducting" or "cutting off" from the whole product of industry the shares falling to the landlord, the capitalist, and the business manager, respectively.

Of his theory, so understood, I will say, in the first place, that it seems to involve a most curious and needless twisting of things out of their proper relations. It is like the picture in a camera, which makes left of right, and puts the feet where the head ought to be. I will say, secondly, that this implied attempt at confession and avoidance does not in the least weaken the force of the simple facts of which I have spoken. These are dead against the proposition that wages are determined as if

\* *Political Economy*, p. 265.

they were a residue. It is still a fact that the laborers, in the mass, have already had their wages for producing the commodities now awaiting the consumer. It is still a fact that these commodities and the money to buy them with belong to the other classes concerned in production. How, then, shall the laborers obtain any part of them? What is to determine how great a part they shall receive? In other words, what is the law of wages?

Apart from gift, I see but one way by which the laborers may obtain a share. They must induce those who own the commodities to part with them. But the laborers have nothing to offer in return except labor. Now there are two ways by which the owners of the commodities may turn labor to account: they may find personal services desirable, and may give some of their commodities in return for such services; or they may wish to increase their wealth, and may therefore be ready to give commodities in return for productive labor, on such terms as to gain by the operation. These, I think, are the ways, and the only ways, by which the right to receive and consume any part of the existing stock of goods may be transferred from the first owners to the laborers. If this be so, several important consequences follow.

It follows, in the first place, that the primary question in wages is not, How much has been produced? nor, How much is going to be produced? but, How much of all that has been produced do the owners care to use in hiring laborers? This is fundamental. If true, it must be a primary truth in any reasonable theory of wages. Of course, no sane person would deny — I think no sane person ever has denied — that there is a relation between the rate of wages and the productiveness of labor.\* The productive-

\* Mr. Walker seems to charge this denial on the Wages Fund theory. In so interpreting that theory, he does not, in my judgment, exhibit his usual penetration. The question between the two theories at this point seems to me to be largely one of mode.

ness of past labor influences the rate of wages by affecting the volume of commodities accruing to employers, thereby affecting their ability to spare from their own consumption. The expected productiveness of future labor will influence the rate of wages by affecting the prospect of gain to be made by hiring on any given terms. But these influences can act on wages only by first acting on savings: they operate not simply and directly, but mediately, through acting on the minds of those who own the existing and coming supply of commodities. Since, therefore, the whole matter depends on human volition, we can lay down no certain rule as to the result, good for all cases. We can only say that, given the savings in any particular case, the rate of wages will result.

It follows, secondly, that the commodities received by the laborers for the work of any given week are not at all products of that same week's labor, but of previous labor, and mainly of labor spent long previously. It is stating the same fact from another point of view to say that wages are, on the whole, paid for producing, not present, but future commodities. If, now, Mr. Walker says that wages are a residue of the whole product after deducting rent and profits, he is bound to tell us particularly which product he means, and what rent and profits are to be deducted. If he means the product of the very labor that is to be paid for, we must remind him that that product is still an unknown quantity, still in the future. Even supposing it a known quantity, wages would still be indeterminate; for, on his own theory, the profits of the future are still unknown, not having been "created" yet. One cannot deduct an unknown quantity from another unknown quantity and arrive at a definite result. Further, even if these unknowable quantities were both known, future products would not avail to pay present wages. The wages of the present must still

depend on the present resources for paying wages. It would be foolish to devise a formula for present wages that might call for more than there is on hand to pay with,—as foolish as to draw up a bill of fare for your dinner without reference to the resources of your pantry.\*

If, on the other hand, he means that present wages are determined by deducting from the products now presenting themselves for consumption the rent and profits accruing in respect of their production, his doctrine is relieved of indeterminateness, but at the expense of self-contradiction and of opposition to plain facts. It becomes self-contradictory, because its fundamental principle is that wages are the residue, or are determined as if they were the residue, of the product of the labor they reward,—not as if they were the residue of the product of some other labor. If they be the residue of the products of past labor, after deducting the corresponding rents and profits, how would it be possible to increase wages by increasing the efficiency of present labor? Secondly, the theory thus understood would be in conflict with plain fact, because the owners of the stock of finished commodities do not determine how much they shall spare from their own use and apply to hiring laborers, by deducting rent and profits from the whole product they have received. People do not themselves consume their whole income derived from rent, interest, and earnings of management, and save only the balance for use in hiring laborers. If they did, there never could be any increase of capital except such as the laborers might contribute out of their wages. We know

\*I readily admit that the comparison fails of exactness at two points. The resources for paying wages may be somewhat increased by greater self-denial on the part of employers, if greater inducements be offered; but Mr. Walker can hardly urge this objection, since, as we shall see later, his theory denies the possibility of the greater inducement. Secondly, if laborers do, in fact, wait even a short time for their wages (do not, *i.e.*, anticipate them wholly through the butcher and the baker), agreements may be made to pay them commodities which are not yet ready in hand, but will be ready in hand when pay day comes.

that, as a matter of fact, income derived from rents, interest, and management, is every day saved and turned into wages. This simple fact stands out, as it seems to me, in flat contradiction of Mr. Walker's theory. It would, in my judgment, be fatal to his theory of wages, even if there were nothing else to be said against it.

For the same reason, I must hold that the authors of *Economics of Industry* have also fallen into error as to the method in which wages are determined. They proceed by first deducting rent and taxes from the whole product of industry: the remainder they call the "Wages-and-Profits Fund." The task they set before themselves is to discover and explain the principles according to which this fund is "shared" or divided into wages, interest, and earnings of management. This method is substantially the same as that followed by Mr. Walker. It is, so far as concerns wages, a process of eliminating or deducting from the whole product of industry the portions called rent, interest, and earnings of management, in order to discover how much remains for wages. It is to be said for the authors of *Economics of Industry* that they do not mistake the statement of the problem for the solution of it. They do not take the rate of interest for granted, but endeavor to take into view all the variable elements in distribution and the action of all the economic forces that go to determine these variable elements. Their one serious error lies in not sufficiently regarding the element of time in their problem. Their procedure involves a sort of economic anachronism. They seem to forget that, if we analyze the total product of industry for any given week into rent, wages, and profits, we are dealing, so far as wages are concerned, not with the wages of that particular week, but with past wages. What they call the "Wages-and-Profits Fund" belongs undividedly to the capitalist class. Strictly, it is to be analyzed into replaced capital and the profits thereon. The portion which re-

places capital corresponds, undoubtedly, to wages paid out previously to laborers. It was saved and invested at some former time or times, and is now recovered with a profit through production.

While, then, it is true that the wages included in the "Wages-and-Profits Fund" of *Economics of Industry* may be regarded as representing real wages, it is also true that no valid law of present wages can be reached by the method followed in that work. It is a method applicable to profits only. Given what the authors call the "Wages-and-Profits Fund," we can argue that, if the part representing wages (past wages) be set off, the remainder of the fund is profit. It is profit because wages were what they were. But it would be quite inadmissible to convert the terms, and argue that wages were what they were because the profit turns out to be what it is. So that, even as a formula for past wages, this procedure would be futile. Further, the past wages replaced to the capitalist in the product of any given week are not the wages of any particular previous week. They were, in fact, paid out, bit by bit, during the whole course of producing the commodities of the week. Partly, they were paid out years before for the labor that made the machinery, buildings, and other plant used in producing them. Strictly, then, a formula derived by this method can only recite the fact that certain sums have been paid out as wages, at various past times, for producing the commodities constituting the "Wages-and-Profits Fund" of the given week. It can give us no light on the question how these past wages came to be what they were. They certainly were not fixed by "sharing" the inchoate products of a week still in the future.

Still less can the method of *Economics of Industry* disclose the manner in which present wages are determined. For here, in addition to the defect already pointed out, it fails, as Mr. Walker's method fails, by setting out with

a wrong assumption as to the precise way in which current wages stand related to, and are drawn from, current production. The authors assume that wages are determined by a process of sharing the results of production, after production is completed. They forget that wages are, with slight exceptions,\* paid before production is completed, and that the final products, as they emerge, belong undividedly to the capitalists. To argue as if the employer's right of ownership extended only to the portion representing his profit is surely not a mode of reasoning that can lead to very trustworthy results. Nor is it a whit better to assume that whatever of the total product is profit or rent is on that account lost to wages. No argument ought to be necessary to show that, in reference to any given point of time, rent, profits, and wages are not at all mutually exclusive shares of the products that have just reached completion. Wages, as an economic share, are not contemporaneous with the other two: it is of the very essence of wage-paying that they should not be. The wages that correspond, as an economic share, to the rent and profits of any given time, have been paid and consumed before the rent and profits appeared. They are, in reference to the rent and profits, wages of the past. Rent and profits are contemporaneous and mutually exclusive shares of the completed product. What is rent cannot become profit, nor can profit become rent. If we deduct rent and profits from the whole product, the remainder, as already pointed out, is not the wages of the time we are considering: it is, by the very nature of the case, replacement of capital,—past payments to laborers, now restored to those who made the advances. The wages, on the other hand, that go in time with the rents and profits we are considering, belong, as an economic share, to products that have not yet appeared,—products

\* The exceptions are such wages as may be due the workmen who give, so to say, the final touches to the product. Mainly, this would include only the labor of exchange.

of the future. In reference to the products of the time when they are paid, wages are no economic share at all. They are drawn indiscriminately from every part of the existing supply of consumable commodities. They are whatever part of that supply the owners choose to spare from their own consumption and offer for labor. The economic origin of the owner's title to the commodities he offers for labor does not once come into the question. He may have received them as rents or as profits or even as wages, or they may have come to him as replacement of capital. All that is a matter of entire indifference for the wages of the time. The vital question is, How great a part of all existing commodities is offered for labor?

We ordinarily assume that the whole of the replaced capital will be so offered; that the owners, having once before saved and invested this amount, will be ready to do the same again.\* But, if we ended here, we should be condemning the laborers of the present time to receive in the aggregate only the same amount that the smaller number received in past years: individual wages, on those terms, must decline. But we know that, as a matter of fact, incomes derived from rents, interest, and earnings of management, are every day spared from their own consumption by the rent and profit receiving classes, and used in paying wages of labor. Any formula or procedure for determining wages that loses sight of this elementary fact, condemns itself in advance to mere emptiness, for it never can accord with the actual state of the case. So far as I can see, every method that proceeds by "deducting" from the whole product, or by "sharing" the whole product, in order to find wages, is doomed

\* Of course, this is only an assumption; and in individual cases it is often untrue, especially when ownership changes by inheritance meantime. But, as we are dealing with aggregate, not individual, capital, we may regard the new savings of some as merely offsetting the waste of capital by others. It is only when new savings exceed waste that we regard them as new savings.

to failure on this account. The only process of deducting or sharing that can safely be admitted in the law of wages is the process that takes place in the minds of those who own the products of industry, when completed. Whatever part they choose to deduct from the whole product for their own consumption stands deducted; the rest goes to the laborers,—not, however, to pay for producing these same commodities, but for producing other future commodities. The true shares of the product look to the past, and rest on services done in the course of production, but unrequited till the product is completed. The laborer's service was paid for and quitted, week by week, as the production went forward. In the completed product he has, therefore, no share nor residue, except such as he shall get by the voluntary act of those who own it. This lies, it seems to me, in the very nature of hiring and wages.

The wages-fund theory may not be perfectly satisfactory: few theories are. But it has, at least, the merit of looking squarely at the fundamental fact that working for wages is not working for a share of the product the work finally results in; that men who depend on wages depend on getting commodities belonging to other men. This primary truth, that those who live by wages are dependent on what is spared or "saved" by those who own the world's stock of good things, I have supposed to be the vital and only essential principle of the wages-fund theory. Mr. Walker quotes authority for the assertion that that theory has received its *coup de grâce*. If any theory has maintained that the rate of wages is "altogether irrespective of the industrial quality, the skill, energy, temperance, of the laboring population"; or that it is "irrespective of the efforts of the laboring class, as a body or individually, to better their own condition"; or that, "if the laborer does not seek his interest, his interest will seek him and will find him,"—then, surely,

we ought to rejoice that so false a theory of wages has been given its death-blow. But I must say that, for my own part, I have never understood the wages-fund theory to assert or to imply any such absurdities. How anybody could have so read and interpreted any standard account of the circumstances determining the magnitude of the wages fund, and the rate of wages resulting from it, is to me incomprehensible. As to the point which Mr. Walker emphasizes so strongly as the point of widest difference between his own theory and the wages-fund theory,—namely, the connection between the productiveness of labor and the wages of the laborers,—I should have supposed the only question about which sensible men could differ would be the *mode* of the connection. The wages-fund theory certainly contemplates a very intimate relation between the two; but it insists that the connection is indirect, being effected through the wills and resources of those who provide capital for paying wages. Mr. Walker, on the other hand, seems to maintain that the connection between the productiveness of labor and the rate of wages is of the direct and simple kind, not mediate, through the action of those who save capital,—the same sort of relation that exists between the efficiency of laborers and the product of their labor. The wages-fund theory holds that wages depend primarily on savings, but adds that savings depend very much on production. Mr. Walker holds that they depend primarily on production, and makes no mention of savings, except in a roundabout way. This seems to me to be the essential point of variance between the two theories.

Perhaps the readiest way to illustrate and at the same time test the two views is to consider the hypothetical case with which Mr. Walker closes his article on the “Source of Business Profits.” I mean the supposition of “an instantaneous improvement in the industrial quality

of the laboring class, . . . with a resulting increase of ten per cent. in the finished product." Mr. Walker gives no explanation of the process by which, in his view, the increase of product is carried at once to the wages of labor: he only finds no economic reason why it should go anywhere else. But he never once mentions the all-important fact that the increase of product goes, in the first instance, by the very nature of the case, to swell the revenues of those who employ laborers. It is not a case for argument as to their right to receive the increase: it is a case for noting the fact and admitting its consequences. How are the laborers to obtain possession of the increased product and to "receive a benefit from it corresponding to that derived by the residuary legatee, whenever the total value of the estate concerned is ascertained to have been, or by some unanticipated cause becomes, greater than was in contemplation of the testator . . .?" The only suggestion offered by Mr. Walker of a method by which they may gain immediate possession of this addition to wages is the mention several times of perfect freedom of competition. Free competition is always implied, as a matter of course, in economic discussion, unless the contrary be stated. But I am quite unable to see how competition can effect anything in the premises. All competition can do is to remove or prevent inequalities in wages. It can bring all laborers of the same grade to the same level of wages. But it has itself nothing to do with setting the level. Competition of laborers is powerless to raise all wages, and our present question relates to a general rise. If the competition to which he refers be that of employer with employer to get control of laborers, I can only say that here again all competition of itself can accomplish is to prevent or remove inequalities, to prevent one employer from getting laborers of a given grade for lower wages than another employer pays. Competition simply enforces the level on everybody. It does so by bringing down the

high as often as by raising the low. It is powerless to raise all or to depress all.

Mr. Walker, then, has presented us with a case in which the products coming to employers of labor would be gradually increased ten per cent. He gives us no clew for tracing this increase beyond the hands of the employing class and into the possession of the laborers. He simply tells us that, if his theory be true, it would pass, all of it and at once, to the benefit of wages. An adherent of the theory that wages are paid from savings has at least a reason to give for the result he predicts. He gives mode and process for the working out of his result in practice. He cites the fact that increase of product, wages remaining unchanged, would cause a rise of profits; that both the means and the motives for saving would be greater than before; that increase of capital seeking labor would naturally follow, with the result of raising wages. How rapid and how great the rise would be he would not undertake to predict, because everything would depend on the choice made by those who own the increased product, between consuming it in their own enjoyments and saving it for use in hiring laborers,—a matter as to which no two communities would behave quite alike. It can, however, be safely predicted that a part will be saved, and only a part. An increase of ten per cent. in the whole product would probably double the net profits of employers. It would be mere absurdity to hold that they would spend no more than they did formerly in personal enjoyments for themselves and their families. The whole increase they cannot be expected to save, and so wages cannot be expected to rise by the whole amount of the increase in product.

Mr. Walker's theory seems to me to call for a double miracle in this case: first, that a set of men who are working for gain should surrender without motive the chance to add greatly to their gain; secondly, that the

laborers should instantly receive an addition of (say) fifteen per cent. to their real wages,\* before the commodities necessary for paying the increase have been provided. For it is of the highest importance in the law of wages — in fact, it is the origin of wage-paying — that civilized labor does not yield immediately a product good for human use. Neither does an increase of efficiency exert suddenly its whole effect in increasing the enjoyable products of industry. It must have time to work out its full results,—as much time, in the case of each product, as that particular product requires for its production. This, we all know, varies extremely; but in all but a few of our commodities the time is considerable. We should therefore have, in the case supposed by Mr. Walker, an increase of ten per cent. soon, in the case of a few articles; but in most cases several months would be required, and in not a few several years. When, for example, should we have the full effect of this increase of efficiency in the case of wheat or of cotton cloth or shoes or beef or houses or furniture? It is impossible here to follow out any of these cases into the details of their production; but let the reader consider and decide for himself whether in any of these cases, or in the case of most commodities, it would be physically possible that the supply should be increased ten per cent. suddenly by a ten per cent. increase of efficiency on the part of the laborers concerned in the production of it.† If we add the fact that machinery, buildings, railways, ships, and all other plant, are also

\* I suppose the ten per cent. increase of product assumed by Mr. Walker would raise wages fifteen per cent., if it passed entirely to wages.

† This point is overlooked, I think, by the authors of *Economics of Industry* in their discussion of the two theories of wages. They say that, when there is an immigration of laborers into a country, "the increase in the supply of labor will increase the net produce of capital and labor, and therefore the Wages-and-Profits Fund" (*Economics of Industry*, p. 205). There can be no question that this result will follow in the course of time. But will it—as a matter of physical possibility, *can* it—happen at once? Must not the increase begin at the beginning of production?

produced by labor, and that the increase of efficiency in this labor cannot take effect until the machinery produced under the new conditions is not only in operation, but has already some of its products ready for consumption, we shall have another element necessary for completing the case. Still another is found in the time required for transportation of materials and finished products from place to place, and in the delays incident to the various changes of hands through which they pass in the course of production and exchange.

On the whole, it is safe to estimate that a year would be required for making anything like the full addition to the current of commodities good for human use that Mr. Walker's supposed case contemplates. If this be even approximately true, from what source shall the commodities come that are to afford the fifteen per cent. immediate addition to wages? Some slight increase may no doubt be made by drawing down the customary reserve of unemployed capital: something may be added also by increased self-denial on the part of those who own the existing stock of commodities, and will own the on-coming supply. But these are small resources on which to count for the means to make a heavy immediate addition to wages. Besides, Mr. Walker expressly says, "There is no greater demand for capital in the case." His theory cuts him off from appealing to these sources for increase of wages: to appeal to these is to appeal to the wages-fund theory. The residue theory must at least be content to wait till the increased product is on the spot, ready to be handed over to the residuary legatee. The only resource to which it can consistently apply for increase of wages, in the present case, is whatever increase of consumable product is actually forthcoming from week to week, which in the early stages would certainly be slight. Even in reference to this, the advocates of the theory must be prepared to tell us more clearly than they

have hitherto done by what precise working of what economic or other principles the employer's right of ownership in the increase of product is to be overcome.

If Mr. Walker's notion of "perfect competition" be that it shall be open to everybody who has, or thinks he has, business ability to set himself up as an employer, then it may be admitted that his reasoning, as reasoning, is excellent; but we should also have to say that it is wholly inapplicable to the world as constituted. If it were possible for all outsiders, in his hypothetical case, to enter into competition with those who control the world's capital, the case would be radically different. To assume perfect competition, where by the nature of the case there must be monopoly, would scarcely be a way of reaching sound conclusions. The only competition which can be relied on to raise wages in the case he supposes, or in fact within a limited time in any case, is, it seems to me, whatever of new rivalry may spring up among the old employers, for the control of labor. The prospect of additional profits may safely be counted on to stimulate every energetic employer into seeking an expansion of his business. But, in order to make use of any laborers he may tempt away from other employers, he must have additional plant and materials. Now, if we are supposing his capital to have been fully employed before, the question arises, Whence is the new capital to come? If the employer is to save more himself, it must be for the sake of higher gains. Yet Mr. Walker maintains that the whole benefit of the improvement will go to the laborers, which would cut off the motive for increased self-denial on the part of the employer. Again, if employers borrow more than formerly, the increased demand for loans will raise the rate of interest; but for borrowing at a higher rate of interest there would be the same absence of motive, if the whole gain of the improvement is to go to the laborers. Putting the same point in another way, if wages

must rise as rapidly as the product increases, no employer has any motive for wishing to get more laborers than before. So that, on Mr. Walker's terms, it is not easy to see whence the demand for labor is to come, that shall raise wages so as to carry the whole increase of product to the laborers themselves.

I hope I have made it clear that the precise point as to which the savings theory and the residue theory of wages must differ is not whether, in the hypothetical case we are considering, there would be a rise of wages: that both theories would agree in predicting. The point at issue, as I understand it, relates to the mode and rapidity of the rise; and the difference of view as to the mode evidently goes back to a difference of view as to the source of wages. At least, if there be no dispute as to the source of wages, I am at a loss to see how there can be any real difference in the case. I have endeavored to get a clear idea of Mr. Walker's precise view on this point, but without entire success. At times, he seems to admit that wages are in the nature of an advance to the laborers; at times, he seems to throw a doubt on the reality of the advance. In one breath, he says, "Wages are, to a very considerable degree in all communities, *advanced* out of capital, and this from the very necessity of the case"; in the next breath, he tells us that "wages are, in a philosophical view of the subject, paid out of the product of present industry." \* He heads a chapter with the statement that "The Wages of the Laborer are paid out of the Product of his Industry," and yet, in the course of the chapter, states that, "in those countries which have accumulated large stores of wealth, wages are in fact very generally, if not universally, advanced" to the laborers. While his statements are thus somewhat wavering, I gather that, on the whole, he considers the advance as rather a convenience than a necessity, and rather apparent than real. "When the employer shall pay is a financial question; *what* he

\* Walker, *The Wages Question*, chap. viii.

shall pay is the true industrial question." \* He lays stress on the fact that even in old countries the laborers are not paid oftener than once a week, and in newer countries they commonly wait even longer for their pay, the result being that employers are 'constantly in debt to their laborers rather than the laborers to their employers.

On the whole, I cannot help feeling that Mr. Walker takes a very imperfect view of the extent to which current wages at any moment are the product of previous labor. If it be not over-presumptuous, I will state briefly my own view of the matter, leaving the reader to judge whether it be the true view or not. In the first place, let me say that the customary analysis of capital into fixed and circulating, or auxiliary and remuneratory, or into fixed capital, materials, and wages fund, seems to me not the best analysis for illustrating the full extent of capital and all its relations to production and to wages. I think a more useful analysis for these purposes would be:—

1. Capital in machinery, buildings, land improvements, money, ships, railways, and other plant.

2. Capital in materials at various stages of growth and manufacture.

3. Capital in exchange, or commodity capital, meaning thereby the stocks of finished commodities awaiting exchange.

One advantage of this division over those commonly used would be that it covers the whole ground, which, I think, the others do not.† Another advantage would be that it would draw attention more strongly than the others do to this question which we are considering; namely, the extent to which wages anticipate the product of the labor they reward. The time required for making

\* *The Wages Question*, p. 137.

† It ought to be clear, for example, that the first effect of increased efficiency of labor must be, not to raise wages, but to add to capital,—the portions of capital included in 2 and 3. Increase of production is inseparable from increase of capital in these forms.

the exchanges of products (or, what comes to the same thing, the time required for transporting and the stocks required for trading) must not be overlooked in considering how long a delay must ordinarily intervene, in civilized industry, between the outlay of labor and the presence of its desired result. Obviously, sufficient stocks of finished commodities, conveniently placed to enable each producer to select readily and judiciously the precise articles desired for his labor, are as much a necessity as machinery is.

Now, taking one's stand at any point of time, it is obvious that these three masses of wealth are, in reference to that time, products of previous labor, distinguished from other products by the fact that they do not minister to anybody's enjoyment, are not even (those of them that are good for human use) in the possession of those who are to enjoy them. It is also obvious that whatever wages any man may have received for labor devoted to producing these things must have been drawn from some other source than the product of his own industry. It was a simple necessity, in order that the people of the time should be able to carry on production as they do, that all the labor these things cost should be devoted to the mere business of *getting ready* to produce. Up to the point of suitably preparing all the natural agents and completing all the apparatus of production and exchange; also, of procuring and advancing through various stages a sufficient stock of each sort of material to supply every workman in the whole chain of workmen engaged on it from beginning to end; also, of completing a sufficient quantity of every commodity to stock the shops and warehouses and all the channels of trade,—up to the point of completing all these preparations, it was necessary that labor should be given without a particle of enjoyable return of its own producing. That point once reached, commodities may be drawn off for consumption as rapidly as

they are produced. The producers need only to keep the system going. It will turn out every day enough new commodities to make good the consumption of the day, and men who had nothing to do with the self-denial that established the system may presently imagine that they are living from "current production." The man who gets paid for his week's work at the end of the week may flatter himself with the idea that his wages are "paid out of the product of his own industry." But to call this a philosophical view of the subject is, to say the least, not complimentary to philosophy.

If the world were suddenly swept bare of all the results of past labor that are now used in production and exchange, leaving us our present knowledge and skill, the tools necessary for making tools and machinery, but nothing besides save the land in its natural state, how long should we have to labor (supposing our subsistence provided otherwise than by our own labor in the mean time) before we should fully restore the industrial system as it exists at the present moment? How long, beginning at the beginning of every sort of production, should we have to labor and wait before we could again flatter ourselves with producing our wages before we receive them?

I shall not be so rash as to attempt to answer this question; but I will say, without fear of being contradicted, that the answer to it would also be the answer to a question once asked — and, as I think, very imperfectly answered — by Mr. Walker: How largely, in fact, are wages advanced out of capital? \*

Let us now imagine that, during the years the community would have to spend in re-equipping production and restocking exchange, a class of men happened to have the power of acquiring day by day, no matter from what source, a supply of commodities answering in all respects

\* *The Wages Question*, p. 134. Mr. Walker treats the question as if it were chiefly one of current account between each employer and his laborers.

to the supply that would have been forthcoming in the ordinary way, if no interruption had occurred. What, under those conditions, would be the measure of wages for all other men during the period of preparation for production? Would it be the total supply of commodities received, or that portion of the total supply which the recipients chose to spare from their own consumption for the sake of present service and future gain? I think that in this case we should all agree both as to the measure of wages and as to the extent and reality of the advance. We should also agree, I suppose, in holding that the amount of savings constituting the measure of wages would not be irrespective of the total receipts, though a knowledge of the total receipts would not enable us to predict the amount of the savings. We should also agree, I suppose, in holding that the amount saved to pay wages would not be irrespective of the anticipated future yield of the labor to be paid for, though a knowledge of the future yield would not enable us to make even a confident guess as to the amount of the savings. Even if we knew the total receipts exactly, and could foretell the future yield of re-established industry with perfect certainty, we should still be in the dark as to the amount of savings, and consequently as to the rate of wages, until we knew also the state of mind of the lucky owners of the bonanza. If these happened to be frugal men, wages would be higher: if they happened to be unthrifty, wages would be lower. We should all, I think, be ready to recognize here an element that does not readily submit itself to the yoke of a formula; and we could not confidently say much more than that wages would depend on the amount these men, being the men they are, choose, in view of all the circumstances, to spare from their own consumption for the purpose of hiring laborers. As to wages in this hypothetical case, then, I think we should not find any ground for serious difference.

Yet I conceive that the conditions determining wages in actual life do not differ in any essential respect from those that would determine wages in this imaginary case. We are, in fact, re-equipping industry all the time. The capital in machinery and buildings wears out little by little, and has to be replaced. The stock of capital in materials is constantly passing off into finished commodities, and has to be as constantly renewed. The stocks of finished commodities are drawn down every day by the purchases of consumers, and have to be replenished, in order that exchange may be carried on effectively. The labor bestowed on each of these objects is precisely as far removed from the enjoyable result it has in view as the corresponding labor in our imaginary case would be. There is, therefore, the same cause for an advance of wages, and for the same period, in the one case as in the other, though, in the infinite complexity of actual industry, the fact may be less easy to perceive. Also, those who own the supply of commodities now on hand, and the machinery and materials for making more, have as effective a monopoly in fixing the rate of wages as the receivers of the corresponding supply would have in our imaginary case.

Perhaps enough has been said to indicate that in my opinion it is at least a little premature to say that the wages-fund theory has been "exploded." Some statements of it may no doubt have been fairly open to criticism. It would be strange if the first statements of so complicated a matter as the law of wages had been quite perfect. Defects of exposition we may hope to remove; but the essential principles of the wages-fund theory rest, in my judgment, on too solid foundations to be even greatly shaken. If the fact that the saved products constituting the wages fund come from production has been in the least overlooked, let us have it more clearly insisted on. If there has been any suspicion that the wages fund

means a store of things locked up somewhere before hiring and production begin; or if anybody has regarded the intention to save as differing essentially from other human intentions and not liable to be changed by change of circumstances; or if anybody has ever supposed that the fund for paying wages is anything else than a portion of the commodities that are continually emerging from production; or if the fact that, as a body of wealth, all capital is by turns wages fund, has been sometimes lost sight of; or if it has been assumed anywhere that changes in the efficiency of labor do not react on the fund for paying wages,—if any of these defects, or any other defects, are to be found in existing expositions of the theory, let us by all means endeavor to get rid of them. But it would be poor policy to throw away wheat, in order to be rid of chaff. While thus unable to accept the main propositions for which Mr. Walker has contended, I cannot close without avowing my grateful recognition of the important service he has rendered in relation to this difficult portion of economic theory. If he has established no new doctrine, he has certainly done much towards improving the old. Future writers on these subjects, whatever their opinions may be, cannot safely overlook what he has written. If the treatment of wages shall henceforward dwell less on the mere formula and more on the industrial conditions, less on the arithmetical process and more on the quality of the living men back of the arithmetic, we shall be largely indebted for the improvement to Mr. Walker. This, if not the precise end he has had in view, is at least so far akin to it that he may well regard such an issue of his labors with entire satisfaction.

S. M. MACVANE.

## “FUTURES” IN THE WHEAT MARKET.

TRADING in contracts for the future delivery of wheat has grown to large proportions in the United States of late years. And, when attempts were made during the past summer to corner the wheat market at Chicago and at San Francisco, the enormous amount of capital so employed, and the predominance of speculative activity at those cities, naturally drew unusual attention to what has been described as gambling in our chief food staple. Leading newspapers throughout the country roundly denounced the speculators for the derangement of trade and the abnormal prices resulting from attempted corners, and, as so often in the past, called in question the legality as well as the morals of what is known as “the future contract.”

In June, the New York *Tribune* concluded a discussion of the effects of speculation, by saying that “in time a wiser public opinion will prevail here, holding speculation in food products hostile to public welfare and the gambler in grain an enemy of the American producer.” Even more direct were the allegations of the Buffalo *Commercial Advertiser* in August, when it declared that “certain little speculative games, much in vogue in American commercial centres, . . . have made the exchanges of our large cities huge gambling clubs,” and added that “among those demoralizing customs is the practice of dealing in ‘futures,’ ‘options,’ buying and selling on margins without transfer of merchandise.” These are but samples of the language used by leading daily newspapers throughout the country during the past summer. In the United Kingdom, similar comment is not wanting. The *St. James Gazette*, of London, asks, “At what point does legitimate trading suddenly become transformed into mad

speculation, involving the public in the greatest inconvenience and entailing loss or ruin upon thousands of innocent people?" The *Mark Lane Express*, whose antipathy to dealings in futures is well known, volunteers the information that "these contracts (futures) are framed to allow of differences in value at a certain date or within a certain time being paid or received, the commodity itself never being intended to pass from the one party to the other. The seller does not possess it. The buyer does not intend to receive it."

The indictment contained in these extracts, if it can be sustained, is certainly broad enough. It not only comes from hundreds of writers for the newspapers, but crystallizes the belief of thousands of intelligent people,—merchants, farmers, manufacturers, and legislators. Such an outcry should not be ignored. When public opinion, as mirrored by the press, strongly condemns the methods of those who collect and distribute our harvests at home and abroad, it is time that an examination should be made as to the facts.

The future contract is the agreement, often erroneously called an "option," by which the seller binds himself to deliver a certain quantity of wheat at a specified price at a date named. The form for these contracts, in use at the New York Produce Exchange, is as follows:—

#### GRAIN CONTRACT. ("FUTURE.")

NEW YORK, ..... 18.....

In consideration of One Dollar in hand paid, the receipt of which is hereby acknowledged, ..... have this day sold to (or bought from) ..... bushels of  
 ....., New York inspection,  
 at ..... cents per bushel, ..... deliverable at  
 seller's (or buyer's) option, ..... 18.....

Signed, .....

This contract is made in view of, and in all respects subject to, the By-laws and Rules established by the New York Produce Exchange.

If the contract be for 8,000 bushels of No. 2 red winter wheat, September delivery, the "option" consists in its resting with the buyer or the seller (whichever the contract specifies) to say on what day in that month the delivery shall be made.

Let us suppose that a general storekeeper or a local grain buyer has received at Parsons, Kansas, in odd lots, or has been through the country and bought, some 16,000 bushels of wheat, and has had it delivered at the elevator alongside the railway. The farmers in Labette and surrounding counties in Kansas presumably take the *Parsons Sun*, and, in addition to keeping themselves informed as to the price of wheat at Chicago and New York daily, are familiar with the market price of wheat at Parsons. The latter depends primarily on quotations at St. Louis, and indirectly on those from New York, winter wheat markets; for winter wheat is raised in Kansas. The Parsons price is nominally the St. Louis price less the cost of transportation thither. The local shipper believes that his 16,000 bushels will grade No. 2, New York inspection, and has paid, on an average, about 54 cents per bushel for it. We will further suppose the cost of shipment to New York to be 25 cents per bushel. It is August. The late "iniquitous speculation and attempted corner at Chicago have killed trading in wheat," and the price at New York has fallen to 80 cents, with the market likely to drag for some time; but telegraphic report reveals a more active market at New York, with an advance of  $1\frac{1}{2}$  cents. Thereupon, this speculative wheat buyer wires a New York grain commission house to sell for his account, September delivery, 16,000 bushels of wheat, and proceeds to load his grain into cars and send it to New York to meet his contract. The New York merchant goes upon the floor of the Produce Exchange, and sells (by contract), for September delivery, 16,000 bushels of wheat, which particular grain is at that mo-

ment in a little elevator out in Kansas. The purchaser of this wheat represents an English house, which imports wheat to sell to millers in the United Kingdom. The Parsons merchant sold when he did on a "bulge," believing that the general outlook for the next six weeks favored a low and dull market, and wishing to get the benefit of the temporary advance. The exporter bought when he did on a direct order from the firm abroad. But, within two hours or twenty-four hours, the exporter, finding ocean freights tending downward, seeing also a prospective decline in prices, and believing that he will be able to make better arrangements for export at a later day and still meet the wants of his principals, sells 16,000 bushels of wheat—this particular 16,000 being in mind—to a New York miller, who, for reasons of his own, wants it. A day later,—or, perhaps, on the same day,—the miller, finding a fractional advance in prices and aiming at a subsequent purchase to supply his mill, in turn sells 16,000 bushels of wheat for September delivery. It is purchased by a member of the Produce Exchange, because he "thinks it cheap" or for "purely speculative reasons," who disposes of it, either at a small loss or profit, to another "scalper," and so on, until sales have been made perhaps twenty times.

This brings us to a consideration of the means by which future contracts are closed out in actual practice. All future contracts (New York and Chicago) contemplate the actual delivery of the grain, and they may be closed out only in one of three ways:—

*First.*—By the actual delivery of the grain, which may be by elevator or warehouse receipts or by the moving of the grain alongside, if from commission merchant to exporter. Under this head, too, comes the system of delivery on what are termed "transferable orders." The contracts on the New York Produce Exchange read, we will say, "sellers' option," which refers to the day on

which the grain shall be delivered. In the case of repeated sales of 16,000 bushels of September wheat given above, suppose the actual wheat arrived at New York September 10, and that the final buyer in the list of, say, twenty who had been trading in it, an exporter, having freight room engaged, wants just 16,000 bushels to make a cargo. By means of a transferable order, the merchant who first sold the 16,000 bushels, September delivery, and to whom the wheat was consigned, delivers the wheat to the twentieth man in line, each of the intermediate traders signing it and passing it along in succession. In this way, all the “trades” between the original seller and the last in line are wiped out by each of the pairs of buyers and sellers paying one another “differences,” as compared with the “settlement price” established each day.

*Second.*—By indirect settlement, which may be described as delivery by clearing the contracts. We may suppose that the New York merchant who first sold the 16,000 bushels of wheat received, soon after, a cable order to buy 16,000 bushels of September wheat. He encounters the man to whom he had previously sold that quantity (contract not yet expired), and buys 16,000 bushels of wheat, September delivery. When the wheat arrives at New York, the two transactions referred to may be settled by cancellation. A sold to B, and B to A, both for September delivery. In theory, A would have to deliver the wheat to B, and receive a check, whereupon B would deliver the identical wheat back to A, and receive A’s check; but this uncalled for friction is avoided by the simple process which suggests itself to men everywhere and in all lines of business.

*Third.*—By indirect settlement, technically called “ringing.” The word suggests “rings” and “corners,” but its application in this instance is entirely devoid of offence. This process may be best explained by further reference to the supposititious sales of 16,000 bushels of

Kansas wheat, where A sold, September delivery, to an exporter, he to a miller, the miller to a speculator, the latter to another, and so on until there were, say, twenty firms or individuals in line. Now let it happen that A receives an order to buy September wheat, and in doing so gets it from the twentieth man in the line just described. By this act, the like of which may and does frequently happen, a "ring" is created. And, if all parties in interest so elect (it being optional with each of them whether to ring out or not), all the contracts may be settled by the payments of differences, based on the settlement price, as described in the case of transferable orders. And this appears to be an actual delivery, too. A sold actual wheat, and was bound and intended to deliver it. Upon his ability to keep his contract, nineteen other trades depended. The last buyer, in the course of business, became a seller to the first. Would it make the method of settlement any more legitimate if A actually turned over his wheat to B, and B passed it on to C, and this was kept up until the twentieth buyer received it, and handed it over to A again?

Those who merely desire to indulge gambling proclivities by speculating in grain may as well stick to the bucket shops. It is true that such an one may buy and sell at the Produce Exchange, and collect his profits or contribute his losses through a commission house or brokerage concern; but let us note where he would land, if he, as principal, proposes to "scalp for eighths." Suppose A to be a member of the New York Produce Exchange, who regards future trading as "bets on the market price,"—a mere collection or payment of differences, with no grain to be delivered or received. He buys 8,000 bushels of December No. 2 red wheat, say at  $83\frac{1}{2}$  cents, and within an hour sells it at 84 cents, making an apparent profit of  $\frac{1}{2}$  cent per bushel, or \$40. Following his steps, under the rules of the Exchange, it is found that he first

buys at  $83\frac{1}{2}$  cents from B & Co., who are selling for London account, to protect purchases of California wheat in transit. Under the rule, B & Co. call the buyer 10 cents per bushel,\* original margin, or \$800, to be deposited to protect the contract. Second, A sells at 84 cents to C & Co., capitalists, who, on the basis of the purchase of December at 84 cents, sell January at  $85\frac{1}{2}$  cents, so as to secure carrying charges of  $1\frac{1}{2}$  cents for the month. C & Co. also call \$800 (or \$400), original margin; and such margins must be put up within one hour from the time when called. A now has two open contracts for December, a purchase from B & Co. and a sale to C & Co., and has up \$1,600 (or \$800), original margin, on which he receives interest at the rate of  $2\frac{1}{2}$  per cent. per annum, although the money is worth to him 6 per cent. He is therefore losing  $3\frac{1}{2}$  per cent. interest on the amount of his margins until the contracts are liquidated. A is also obliged to put up additional margins, in case the price advances or declines while the contracts are open. If the price advances 5 cents, he has to put up \$400 additional margin with C & Co. If it declines 5 cents per bushel, he has to put up a like sum to protect B & Co. If B & Co. make no trades meanwhile that will "ring out" with C & Co., and so let A out, this money is kept up as margin until December 1, when B & Co. deliver to A a load of wheat at  $83\frac{1}{2}$  cents, and A at once delivers it to C & Co. at 84 cents, adjusting the contract to the settlement price, which may be higher or lower. A then realizes his \$40 profit, less loss of interest on his margins, and discovers that he actually bought and sold wheat, and did not merely bet on the market.

It should be added, particularly for the benefit of those who regard "futures" as excuses to bet on prices of grain, with no expectation on the part of buyer or seller to

\* Or they may call 5 cents, if the buyer be in good credit, or \$400.

make a delivery, that, if the grain due on such a contract be not tendered (sellers' option) before 1.30 P.M. of the last business day of the month, the purchaser notifies the committee on grain to buy it in for his account at public "call," which is done. The grain so bought in is then a good delivery on maturing contracts that day.

The validity of contracts for future delivery, of which the above is an example, has been the subject of conflicting decisions in the State courts; but in the Supreme Court of the United States, in the case of *Irwin v. Williar*, decided early in 1884, the American law was authoritatively stated by Mr. Justice Matthews, as follows:—

The generally accepted doctrine in this country is, as stated by Mr. Benjamin, that a contract for the sale of goods to be delivered at a future day is valid, even though the seller has not the goods nor any other means of getting them than to go into the market and buy them; but such a contract is only valid when the parties really intend and agree that the goods are to be delivered by the seller and the price to be paid by the buyer. And if, under guise of such a contract, the real intent be merely to speculate in the rise or fall of prices, and the goods are not to be delivered, but one party is to pay the other the difference between the contract price and the market price of the goods at the date fixed for executing the contract, then the whole transaction constitutes nothing more than a wager, and is null and void. And this is now the law in England, by force of the statute of 8 & 9 Vict. c. 109, s. 18, altering the common law in that respect. Benjamin on Sales, §§ 541, 542, and notes to fourth Am. edition by Bennett.\*

\* 110 U. S. 499. The American cases are collected by Benjamin, in the place cited. Julius Aroni, in his valuable compilation, *Futures* (New Orleans, 1882), points out that the doctrine that an executory contract for the sale and future delivery of goods does not become a wager by reason of the seller not having the goods in his possession when entering into the contract, was not questioned in England until 1822, when Lord Tenterden, in *Lorymer v. White*, 1 B. & C. 1, said that the practice of making such contracts was not to be encouraged. Later, at *nisi prius*, in *Bryan v. Lewis*, 1 Ry. & Moo. 386, he ruled that, if one contracts for the sale and future delivery of goods and neither has them at the time nor has contracted for their purchase nor has any reasonable expectation of receiving them, but means to go into the market

It must be added that repeated efforts have been made by State legislatures to stop trading in futures,\* the laws of Illinois being, perhaps, the most interesting and instructive example of this kind of legislation. But it is too much to expect that want of success will prevent the repetition of these efforts.

The most important, because the most necessary, commodity traded in is the chief food staple of civilized communities, wheat. A broad view of the equities of trade in this line must place special emphasis on the need for all natural or artificial aids or devices tending to cheapen the cost of flour to the consumer. When society in leading wheat-consuming countries was more primitive than it now is; when general distribution, in some instances over a series of years, was not equal to home requirements; when the farmer carried his grain to the banks of the nearest river to find the miller who met the local demand for flour and shipped a surplus to the neighboring town:—in short, when there was little, if any, need for large stocks of wheat or for "centres of distribution," as we now understand the term, then it was that Produce Exchanges and Boards of Trade were unknown, and the existing form of future contracts in grain had not made its appearance.

But with increase of population, changes in currents of trade, exhaustion of soils, the rise of competitive industries, the enormous reduction of the cost of transportation, and the cultivation of new and fertile areas of soil, certain countries found themselves producing less and less

and buy them for delivery, such a contract is a wager on the market price of the goods. But, after being doubted in one or two cases, this doctrine was set aside in 1839, in the case of *Hibblewhite v. McMorine*, 5 Mees. & W. 462, with emphatic language by Barons Parke, Alderson, and Maule. The English doctrine appears, then, to be in harmony with that of the Supreme Court of the United States.

\*Ohio, Laws of 1885, p. 254; Illinois, Statutes (Starr and Curtis's ed.), ch. 38, § 170; Arkansas, Statutes (Mansfield's ed., 1884), § 1848; Mississippi, Laws of 1882, ch. 117.

wheat, and others raising far more than they could consume. Thus, the United Kingdom, with 37,000,000 population and a wheat crop of about 75,000,000 bushels per annum, has to import about 145,000,000 bushels for food, besides maintaining stocks. This requires an average of about 12,000,000 bushels of wheat monthly from other lands. Elaborately devised machinery for buying wheat at a moment's notice in the cheapest market, so as not to overstock in the face of possible declines in prices, is now an absolute essential; and, with it, the United Kingdom and other countries successfully wrestle with starvation. Harvest seasons are widely distributed throughout the year. Australia, New Zealand, Chili, and the Argentine Republic (moderate exporters) gather their wheat in January; Egypt, Persia, and Asia Minor, in April; California and Oregon, Kansas and Missouri, in June; Austria-Hungary, Southern Russia, Dakota, Minnesota, Wisconsin, Nebraska, Iowa, Illinois, Indiana, Michigan, Ohio, and Canada, in July; Manitoba, in August, and Northern Russia, in September and October. It is comparatively within recent years that the United States, India, Russia, Australia, and New Zealand have found themselves competitors in supplying the chief importing countries. Surplus yields are now coming into sight in different quarters of the globe at different seasons, and in quantities which vary from year to year with the conditions governing growth. This has developed the great grain markets, like Bremen, Hamburg, Lisbon, Paris, Marseilles, London, Liverpool, Bristol, Glasgow, Odessa and St. Petersburg, Bombay, Kurrachee, and Calcutta, Melbourne and Sydney, New York, Chicago, Cincinnati, St. Louis, Toledo, Philadelphia, Baltimore, and New Orleans.

The grain trade at these cities is responsible for the large and growing task of securing the surplus wheat in exporting countries, transporting it to centres of distribution, grading and storing it, or for placing such a share

of it as may be spared in that portion of the world where it is most needed. In importing countries, they seek to secure wheat in the cheapest markets, without so supplying themselves that a decline may find them overstocked at relatively high prices. Hence the necessity for a most important statistical work,—that of obtaining the latest information concerning crop prospects, harvest returns, qualities, and acreage; stocks of wheat "in sight" at principal points of storage, in the more important grain exporting and importing regions; receipts of grain at interior towns and at shipping ports, stocks exported, stocks afloat and arrived out, and a multitude of other facts tending to fix the actual value of wheat. No small share of this information is that relating to ocean shipping, berth-room and charters available at various ports, the quantity of tonnage on the way thereto, the prospects of return cargoes, and much else influencing rates of ocean freights, and in turn aiding to determine the price of wheat at Liverpool.

This work has to be done, that the world may be fed regularly and cheaply. The machinery necessary to its accomplishment has not been developed in a day; and there is, undoubtedly, still room for growth and for improvement of method or detail. But in view of the intricate problems entering into the work of securing, "carrying," and distributing surplus wheat from various portions of the globe, briefly outlined above, it appears almost a self-evident proposition that the work in hand cannot continue without contracts for future delivery.

Wheat stocks in the United States are from seven to ten days from Liverpool; those in Russia may be conveyed to English ports in from twenty to thirty days; supplies at ports in India are a thirty days' voyage from London; those from the Argentine Republic require ninety days, and from Australia and California about five months. The requirements of English and Scotch millers are for

various qualities; and British importers must continually keep in view the amount of home stocks, the relative wheat harvests and general quality of the yields in exporting countries, the fluctuations of prices abroad and the tendency of prices the world over, in view of generally large or small yields in late years,—not omitting temporary or local influences in any large market, due to weather reports, attempted corners, “cut rates” of transportation, and the like. This leads directly to some distinctly economic uses of the future contract, to emphasize which illustrations from actual transactions will be useful.

A Glasgow miller, in February last, desired to purchase 100,000 bushels of California wheat to grind into flour. The price had been tending upward, due in part, perhaps, to some of the earlier movements of the late wheat corner at San Francisco. He purchased 100,000 bushels of California wheat, engaged freight room, and had it shipped to Glasgow. We will say that the price and freight would make the wheat cost him in Glasgow about \$1.07 per bushel. But this wheat would not arrive out until September or October, five months away. By that time, following the Atlantic coast harvests, and with the then probable renewal of arrivals of Russian and Indian wheat, the Glasgow price might or might not be lower than \$1.07. In order to insure himself against loss, the Glasgow miller sold 100,000 bushels of wheat for October delivery at New York. The California wheat arrives at Glasgow, but the price of wheat the world over has declined, and the miller finds that it has cost him two or four cents per bushel more than the then ruling price. Under strictly old-fashioned methods, had he not sold 100,000 bushels of October wheat at New York, he would find himself at a decided disadvantage in competition with millers who had not anticipated their wants as he had. But he is not so placed. When he found

the market a few cents lower (the world's chief markets, under normal conditions, being on a parity one with the other), he cabled an order to New York to buy 100,000 bushels for October delivery. At the maturity of his New York speculative contracts, he finds a profit about equal to the loss on his California transaction. So that, notwithstanding he bought 100,000 bushels of wheat at a cost of \$1.07 delivered, he in reality gets this wheat at \$1.03 to \$1.05, owing to his protecting future contracts, the price last given being, we will say, about the ruling quotation at the date of the arrival out of the consignment from San Francisco. Had he found a profit on his California wheat when it arrived,—that is, had the price advanced three to five cents per bushel after the grain left San Francisco,—he would have covered his New York sale at a corresponding loss, thus leaving him situated as before. In this way, English millers and importers of wheat, buying in the United States, Russia, India, Australia, or elsewhere, habitually protect such purchases from fluctuations in price, while in transit (one to five months), by selling futures against them at New York or Chicago and later by covering their contracts. And, when we consider that wheat export purchases made in this country, in Russia, India, and other parts of the world, aggregate some 250,000,000 bushels per annum, and that a very large proportion of the isolated purchases are sold against in New York and Chicago, so that they cost the buyers no more delivered than a decline while in transit may entitle them to, and that all of these sales are in time covered by corresponding purchases of wheat, and that in all cases these "speculative" sales and purchases call for the actual delivery of grain, we may gain some conception of the reasons why future sales make so large a total every year.

But these insuring or protecting sales and purchases of grain are by no means confined to foreigners, who buy

throughout the world and ship to Europe. One may also find ample illustration at home. A New York merchant buys 100,000 bushels of No. 1 hard wheat at Duluth, and orders it shipped by vessel to Buffalo, to go thence to New York by canal. He does this, not because he "wants the wheat for his own use," but as a merchant who believes that the Duluth price and the cost of getting the grain to New York, in view of known or apparent market conditions or of anticipated requirements abroad, will enable him to sell the grain in New York at a profit. With a more primitive view, he would ship this grain, wait until it arrived, look for a purchaser, and, finding one, sell the wheat at the price current at date of arrival, —say, three weeks after he bought it. If at a profit, well and good; but if the price had declined, he would sustain a heavy loss, owing to the size of the shipment. Thus, when the world's requirements are for large available stocks, and the movement of grain must be in large lots, the future contract comes in to protect the handler. The New York merchant, therefore, sells 100,000 No. 2 - spring, September delivery, at Chicago, at the date of his Duluth purchase, in August. When the wheat reaches Buffalo, the price has advanced and millers there want some No. 1 hard wheat. He sells them 25,000 bushels, and buys 25,000 bushels of No. 2 spring wheat at Chicago, September delivery, to make good the original quantity purchased. By this time, he has also sold at New York 100,000 bushels, September delivery, to an exporter, and bought 100,000 bushels more at Chicago, relying on the 75,000 bushels on the way and his ability to get 25,000 bushels more, before it is demanded, to keep his engagement. When the 75,000 bushels of No. 1 hard spring wheat reaches New York, the price has declined fractionally; and the owner is enabled, in consequence, to purchase 25,000 bushels at a slightly better price, relatively, than he had paid in Duluth, selling

25,000 bushels coincidently at Chicago for September delivery. He lost on his Duluth purchase and on the 25,000 and 100,000 bushel purchases at Chicago, and on the 25,000 bushel purchase at New York. But he made rather more than corresponding gains through his sale, spot delivery, of 25,000 bushels at Buffalo, including profits on his sales of 225,000 bushels for September delivery at Chicago and at New York, so that he gains on sales of 250,000 bushels and loses on the purchases of 250,000 bushels. The transaction, as a whole, is not very profitable; but millers at home and abroad get wheat at the lowest market price at dates of purchases, the grain is moved from Minnesota elevators to Buffalo and New York and to the Glasgow mill, and the merchant whose sagacity, energy, and foresight led him to aid in the undertaking, even when price conditions were unfavorable, is able to protect himself from excessive loss, without depressing the price to the original holder, who represents the grower, and without having an incentive (not to mention the ability) to unduly advance the price to the consumer, as represented by the miller.

This transaction is simpler than thousands which take place at the leading grain centres throughout the United States almost daily. The quantities of wheat involved may or may not amount to 500,000 bushels; but the total nominal transactions, those which may take place while the grain is in transit, and the protecting sales (which always amount to double the quantity first purchased) may be three or twenty times the actual quantity on which they are based. Here, too, one may find an economic purpose in the collection and grading and maintaining in good condition, by means of weighers and inspectors at the chief interior and seaboard cities, of large stocks of wheat,—in addition to the incentive which comes from a desire to hold it in readiness to take advantage of a demand at home and abroad.

Considerations such as these naturally raise the question as to the proportion of sales of cash wheat and of wheat on future contracts. While official circulars of the grain exchanges at the principal Eastern and Western wheat markets give a daily record of sales of wheat, spot and future delivery, it may be fairly questioned if any of them succeeds in reporting all of such sales. Official reporters on the exchanges, note-books in hand, call on the members of the boards while on the floors, daily, with requests for the amount and character of sales made and prices obtained. But complete returns are not always furnished. Furthermore, the statisticians or secretaries of the exchanges, so far as I can learn, do not give in any instance aggregates of cash or future sales, by weeks or by months, so that there is no available report having an official character. So important, however, are records of this kind, indicating, as they probably do when considered over extended periods of time, a fairly constant proportion of the actual totals, that I have been at some pains to go over the official daily circulars of the New York Produce Exchange, to learn what the details mean when collated, added, and classified. Here is the result:—

TOTAL RECORDED SALES OF WHEAT AT THE NEW YORK PRODUCE EXCHANGE.

(ON AND OFF CALLS.\*)

BY WEEKS DURING THE FIRST HALF OF 1887.

During Weeks ended		Bushels.	
		Sales, spot.	Sales, futures.
Jan.	8,	1,089,200	25,181,500
"	15,	1,203,200	25,450,000
"	22,	1,082,800	15,030,200
"	29,	900,000	15,486,700
Feb.	5,	1,021,000	16,222,000
"	12,	1,368,000	23,316,000
"	19,	2,044,000	36,404,000
"	26,	1,855,800	33,856,000
March	5,	1,792,580	28,119,420
"	12,	1,699,080	48,923,020
"	19,	1,331,000	44,174,000
"	26,	1,602,000	31,480,000
April	2,	898,000	34,561,000
"	9,	875,000	33,970,500
"	16,	1,237,000	39,383,000
"	23,	2,046,000	36,143,000
"	30,	2,097,000	48,627,000
May	7,	2,441,000	63,376,000
"	14,	3,047,000	40,004,500
"	21,	2,549,500	24,937,000
"	28,	3,356,500	23,890,000
June	4,	2,030,000	30,998,000
"	11,	1,434,000	23,553,000
"	18,	4,521,000	34,945,000
"	25,	3,370,000	41,474,000
July	2,	1,955,000	18,238,000
Totals, . . . . .		48,836,300	667,594,740

The arrangement of the totals by weeks indicates the average fluctuations in the volume of transactions for both spot and future delivery, during a period with the characteristics of which we are all more or less familiar. The

\*The "call" is a daily formal gathering of the members of the board, where each staple in which there are regularly established dealings is officially "called" in a specified order and a record is kept of the prices thus fixed and the parties to the transaction, the sales being made by auction to the highest bidder. Transactions here are formal as opposed to the informality of dealings carried on in the wheat-pit. It is on call, also, that trades are closed out by buying in or selling out under the rule, after complaint to the grain committee of commodities defaulted on, under contract. In this way, settlements of the contracts of failing traders are matters of record. The call also enables banks and others lending money on grain as a security to know, day by day, what are the officially established prices.

total sales of cash wheat (spot delivery) during the six months are equal to about twice the receipts at New York during that time, omitting quantities necessary to maintain stocks and local mill requirements. Sales by contract for future delivery at New York within the six months amounted to about thirty-five times the receipts of wheat within that period, and comprise 94½ per cent. of the total cash and future sales. The future sales as reported are nearly double the total reported harvest of wheat in the United States in 1886, which was 457,000,000 bushels. The totals of cash and future sales at both New York and St. Louis, the leading red winter wheat markets, as given in detail only in official reports of the grain exchanges at those cities, both on and off calls, are found, after careful compilation, to be as follows: —

During first half 1887.	Sales, cash.	Sales, futures.
At New York, bushels, . . . . .	48,836,000	967,594,000
At St. Louis,        "        . . . . .	5,675,000	134,720,000
Total sales, bushels, . . . . .	54,511,000	1,002,314,000

It is undoubtedly well within the limits of probability to assert that future sales of wheat at St. Louis, Chicago, and Toledo, with like trading at leading Atlantic ports, aggregated during the first half of 1887 considerably in excess of 2,000,000,000 bushels of wheat; in other words, that they more than equalled the total production of wheat in the world in 1886.\*

There is, however, a class of men trading in futures in addition to those already outlined. There are members of Boards of Trade and Produce Exchanges who

\*I know of no other report of aggregates of sales of wheat futures over a considerable period of time, and have sought to compile this from insufficient data, with the intention of making a statement as to the probable situation, whether the result on the surface appear to the advantage of those most interested or not.

sell and buy wheat with no intention of being connected with the work of moving or marketing the crops, — "speculators pure and simple." At times, a group of them may sell futures furiously, merely for the purpose of depressing prices. Should buyers be scarce, this onslaught would be likely to result in prices going off, when the sellers might, as they frequently do, cover their short sales at a profit; or the intention may fail absolutely, as is more often the case, unless action is based on the broader conditions of the market, and aided by special information or better insight into the operations of demand and supply in the near future. This may be the beginning and the end of the operator's interest in wheat. But the volume of trading in futures is not made up of transactions of this character. When it is recalled how the interior wheat buyer, the city grain merchant, the miller, the exporter, and the foreign importer or miller are all engaged daily in securing and moving or selling lots of wheat, varying from 8,000 to 500,000 and even more bushels, and that purchases of parcels of spot grain to be moved are protected by sales of futures, which have to be covered later by purchases, it is easy to see where the bulk of trading in futures comes from; and there is also, in the estimation of the writer, a reasonable and proper cause for operations of this nature.

Still, it is urged — as, for example, by a San Francisco journal — that trading in futures furnishes the opportunity "and a temptation" that "few care to resist to get up a corner on the market, and, as in the present instance" (June, 1887), cause "universal embarrassment and widespread ruin and disaster." Now, it must be remembered that "corners" thrive on special information, or intelligence in the exclusive possession of those having large experience and means: whereas, the growing tendency of the present system of trading is towards the collection and dissemination of better and more complete intelli-

gence regarding production, stocks, transportation, and consumption of the product. Corners in food-stuffs were formerly far more successful than of late years.

The meaning of an attempted corner is that the would-be cornerers believe that the probable supply will not be equal to the expected demand, together with requirements for maintaining what are denominated minimum stocks on hand. The past eight months are strewn with the wrecks of attempted corners in cotton at Galveston, New York, and Liverpool, and wheat at San Francisco and Chicago. Confining attention to those in wheat, it may be premised that the real — that is, the statistical — basis of the San Francisco and Chicago attempts to corner wheat was, on the face of it, sufficient to indicate probable success. English and French stocks were lower than they had been for years. The government Agricultural Bureau reported a crop of 457,000,000 bushels of wheat (both coasts) in 1886; and various investigations of “invisible” wheat stocks in the United States on July 1, 1886 (stocks of wheat in and out of farmers’ hands, not in sight at specified points of accumulation), indicated that our visible and invisible wheat supplies a year ago amounted to about 75,000,000 or 80,000,000 bushels. The calculation of probable wants ran about as follows:

	<i>Bushels.</i>
Crop of wheat, 1886, . . . . .	457,000,000
Wanted at home, to July 1, 1887, for food and seed, etc.,	335,000,000
Apparent probable supply available for export, . . .	122,000,000

or 4,000,000 bushels less than the annual average exports since 1881. This, in the face of low stocks abroad, the growth of population and the decline in the average annual export price of wheat in the United States from 106.6 cents per bushel in the year ending June 30, 1884, to an average of 87 cents per bushel in the three years following, was believed (as subsequently proved to be

true) to point to excessive takings for export during the year ending June 30, 1887. To supply such a demand, the supposed reserves would have to be depleted. Hence, the notion of the practicability of a corner in the late months of the last cereal year.

Simplifying the operations of those who conducted the cornering operations, we find that they went into the market in the cities named in the earlier months of the year, and bought all the June wheat that they could induce members of the exchanges to contract to deliver to them; that is, a regiment of San Francisco speculators, as well as thousands of farmers and others, contracted to deliver so many thousand bushels of wheat during June. In Chicago, hundreds of traders, and others there and throughout the country, notably the large millers of the Northwest,\* sold likewise for future delivery to the "clique" at Chicago. The price of wheat advanced at Chicago and at San Francisco, and, as inevitable, though to a less degree, throughout the world's markets; that is, the price of the cornered future advanced, as that was in demand. I have not heard those who sold these millions of bushels of wheat called cornerers nor gamblers, nor are they generally regarded as having helped a corner. Yet they sold what they did not possess, expecting to be able to obtain it in time to make a good delivery. Many millions of bushels of wheat were sold (at Chicago) by those who had wheat in elevators in Minnesota, held largely for milling purposes. This they sold against in Chicago, and shipped the wheat to meet the contracts as rapidly as they could get cars to carry it. In fact, every "short" expected to have to make good his contracts to deliver wheat.

Never was there a better illustration of whether future contracts are based on actual deliveries or not! Chicago warehouses and elevators were bursting with grain. Sidetracks for miles without the city were blocked with cars

\* As publicly announced, and not denied.

of grain, which it was impossible to unload at times for want of storage facilities. If this corner was purely a gamble on the mere price of the article, it would appear that there was an unnecessary outcry at Chicago over the lack of room to store the grain shipped there. And, finally, it was the shorts who "broke" the Chicago and San Francisco corners, by demonstrating that interior supplies were ample for actual requirements.

Of the effect of the cornering operations, even in a case where they failed, some are too obviously mischievous to require comment. The fever of speculation which was generated for the time being, the depressing reaction which followed, and the injury to trade in other lines by the locking up of large sums of money in banks at leading grain centres, are evils universally recognized. No doubt, too, such considerable interests as the California and Chicago milling industries were injured. The price of wheat flour in California was advanced, owing to the rise in the price of wheat, from \$5 to \$6.30 per barrel; and Minnesota wheat invaded the Pacific Coast, and sold there at \$5 per barrel. Chicago millers were similarly troubled, although the public there, too, were relieved from anxiety. Trade, moreover, between San Francisco and the United Kingdom was disturbed, owing to the advance in ocean freight rates, caused by the fear of not securing return cargoes of wheat, owing to cornering operations.

On the other hand, it is to be said that the confident assertions as to our exports of wheat being cut off by an artificially stimulated price are not supported by facts. Shipments of wheat (and flour as wheat) from July 1, 1886, to July 1, last, were the largest since 1879-80 and 1880-81, aggregating nearly 160,000,000 bushels. On August 1, the London *Miller* said, "American wheat shipments to the United Kingdom will be seen to have been heavier in the past month than at any other period

of the cereal year.” But this is not merely an after-sight. On May 30, the *Chicago Tribune* reported that “arrangements have been made to ship some 20,000,000 bushels from the Atlantic seaboard during June.”

In fact, the alleged rise of wheat and the declamatory talk about “raising the price of bread” were not true, even during the lives of the “cliques.” The contract grade at Chicago is No. 2 spring wheat. At New York, from April 1 to July 1, spring wheat patent flour did not vary materially in price, except during the latter half of June, when it ranged a trifle lower. Since the break in the Chicago corner, prices of wheat have been “lower than ever before” the world over, which must result to the distinct advantage of the miller, and hence of the consumer, in all directions. The *Buffalo Milling World*, writing of the Minneapolis millers and the collapse of the Chicago wheat corner, says:—

Prices fell about 10 cents, and it is estimated that Minneapolis millers took from 1,500,000 to 2,000,000 bushels at a decline of about 8 cents a bushel. This means a difference of nearly 40 cents a barrel, which, while of course not all profit, makes an appreciable difference in the millers’ accounts.

The *Chicago Tribune*, referring to the reaction in prices after the panic at the Chicago Board of Trade, said on July 22:—

The straight grade of No. 2 Chicago spring wheat sold in this market last Wednesday at twenty-nine shillings per quarter in the harbor at Liverpool, being equal to only 87 cents per bushel, “cost, freight, and insurance.” This was the lowest price ever reported.

The *London Millers’ Gazette* advances the opinion (in August) that:—

With regard to the present general position, it is true that prices of foreign wheat, and especially of American wheat, are now more advantageous to the home miller than they have been for a long time past; for red American wheats were perhaps never so cheap, relatively, as they are now.

The truth is that the advance in the price of wheat at Chicago from February to May was not material. During the following six weeks there was a net gain of 11 or 12 cents per bushel, followed by a drop of 26 cents per bushel, after the crash of June 14. At New York, the corresponding gain in price, May to June 14, was about 8 cents per bushel; and the reaction in sympathy with the break at Chicago was about 10 cents per bushel (to July 2) as compared with two and one-half times that amount at the seat of the disturbance. While, therefore, the extra prices paid for grain by speculators — participants in the clique movements at Chicago and San Francisco — were in fact distributed among thousands of merchants and millers and farmers in the West and Northwest and on the Pacific Coast, the price of wheat averaged much lower than it would have been likely to, except for the attempts to corner, which reflects itself in cheaper bread for millions.

It is in the face of such facts as these that the Knights of Labor were counselled by their executive head "to keep their eyes turned towards the produce exchange; and, the moment the grain or produce gambler announces that there is a scarcity in a certain article of food, every member should resolve that until the unhallowed hand of the speculator has been removed not an ounce more than can be avoided will be purchased." Of course, such a boycott as this, if it could be carried into effect, would be a godsend to the speculative operators; for, in order to secure fabulous profits, they would only have to sell wheat "short" *ad lib.*

The outcome of such an experience as we have had with corners this year must be to discourage them seriously. Men may talk of laws against cornering food products in the great exchanges, but there never was and there never is likely to be a law which can prevent one man or set of men from buying that which is regarded as

cheap, to any extent that others may be willing to sell, or to contract to sell, provided the buyer be able to pay for it. Nor, as has been well suggested, could any court convict and punish so severely and promptly as the inexorable laws of trade punish the speculator who trespasses too far on the peace of the community.\*

The general business transactions of the world to-day, not only in wheat and corn and oats, but in coffee and sugar, in cotton, in petroleum and tobacco, in iron and steel, woollen and cotton goods, in building of all varieties, and even the dealings of the humblest retail grocer, are found, upon analysis, to be conducted on the basis of future contracts, either expressed or understood. For example, supplies of sugar and coffee are contracted from the importer or jobber by interior houses on the basis of a future delivery; and the importer in selling sells a future, and often goes "short" in so doing, relying on his ability to buy the product in time to ship it. And when many retail grocers throughout the country refused to buy stocks of coffee early in 1886, believing that the advance in price was too rapid and could not be sustained, they practically went short of the coffee market, to their cost; for they all, sooner or later, had to buy at much higher prices.

The great grain markets of the country have systematized the universal practice, and surrounded themselves with safeguards to permit the more efficient and satisfac-

\*The New York *Evening Post* in June last said on this subject: "Yesterday, a clique of wheat cornerers at Chicago were fined more than a million dollars for this offence, and the fine was instantly paid. No public expense was incurred in prosecuting the offenders. The State's Attorney was not called upon to render any service. There was no grand jury to find an indictment, and no petit jury to try it, no struggle between the prosecution and the defence over the selection of jurors, no attempt at embracery, no exceptions to the rulings of the court, no appeal to the higher courts, and no petition for executive clemency. It need hardly be said that no court or jury would ever impose a fine of a million dollars in such a case, and that no sheriff would ever be able to collect it if it were imposed. . . . The million dollar fine was not only col-

tory marketing and distribution of the world's crops of wheat. It has been seen that the greater share of transactions in futures, which have been aptly termed an adaptation of probable supplies to anticipated requirements, consist of protecting purchases and sales, to insure against loss on wheat in transit, owing to fluctuations in prices during the time occupied by shipment.\*

The system of dealing in wheat by means of future contracts may therefore be declared to result in positive and direct economic advantages. It furnishes a ready market to the producer, who can no longer carry necessary surplus stocks. It affords a means of transporting wheat from far distant producing countries at a fixed price delivered, at a minimum of loss through fluctuations of prices while in transit. It enables the trade to collect enormous stocks of wheat and carry them over from seasons of plenty to seasons of scarcity, without loss to producers, millers, or consumers (when considered over considerable periods of time), as may be shown by the records of the decline in prices of wheat and of flour,

lected in a summary manner from the wheat cornerers, but it was collected from each of them in the right proportions, and from the absentees as well as those present. If there were any participants residing in London or Liverpool, they, too, paid their proper share. . . . Judgment, execution, and punishment all came instantaneously. There was a flash of lightning and a clap of thunder; and then the sun came out, and everything was serene again. The world is going on as before, and is just as rich as before. There has been a transfer of capital here and there. It has generally been from the pockets of the speculating class to those of the producing class."

\* Well-informed and experienced members of the grain trade have the impression that this class of dealings in futures constitutes by far the greater share, in the absence of special temporary disturbing influences. If 100,000,000 bushels of actual wheat were moved in the United States east of the Rocky Mountains, between January 1 and July 1, last,—a low estimate,—and 150,000,000 from exporting countries, we may regard 250,000,000 bushels as an approximate total of the quantity against which double that amount of protecting sales were probably made at New York and Chicago during the period specified. This estimate allows for no intermediate sales and purchases, which at the lowest estimate are likely to treble the grand total, thus accounting for at least three-fifths of the probable aggregate of trades in futures at New York, Chicago, and St. Louis in the first half of the current year.

together with those of the growth of heavy interior and seaboard stocks awaiting the first telegraphic demand. The tendency is also to equalize prices the world over, as a casual inspection of grain exchange circulars will attest, and to minimize fluctuations by keeping the markets, and through them the world at large, abreast of developments as to crops, the yield, quality, stocks on hand or in transit, and the course of prices at all important centres.

That in the long run these results inure to the advantage of the consumer, and that like any other improvement in production or distribution the elaborate organization of trade cheapens the product for him, admits of no question. This gain has to be accepted, no doubt, like most others, subject to the risk (probably a diminishing risk) of abuse. But an impartial examination and sober judgment of the facts, I believe, can lead to no other conclusion than that, on the whole, the community, after all, purchases at a cheap rate the advantages resulting to it from the dealings in futures.

ALBERT C. STEVENS.

## NOTES AND MEMORANDA.

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OUR readers will be glad to hear that there is a project well advanced for publishing in England an economic journal, to be issued quarterly. The new periodical will probably be edited from Cambridge, under the charge of Professor Marshall, and the hearty co-operation of the leading economists of England is promised. Its establishment is not yet assured; but the plan has been mature in the minds of the projectors for some time, and is likely to be carried out in the course of the coming winter. There is a place for such a journal in England, where there is at present no convenient medium for the interchange of thought and the publication of monographs, while there is growing activity and interest in economic subjects. The *Journal of the Statistical Society* alone is in the field, and occupies but a small part of it.

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THE *First Report of the British Gold and Silver Commission*, just issued, is characterized by the absence of valuable material either in the testimony or appendices. It is evident that no trustworthy collection of prices in India can be looked for from this source. The evidence is, as in the case of Mr. Palgrave, mainly a commentary on material already in the hands of the public,—chiefly on that given in the *Third Report of the Commission on the Depression of Trade*. Mr. Giffen's testimony is significant for an admission that there are no practical means of telling whether gold has risen or fallen in value. (Q. 858, 868.)

The poverty of results may be due either to a dying interest among the English in the practicability of bimetallism since the sale of silver by Germany to Egypt or to a conviction that the Commission was appointed to satisfy a passing clamor, and was intended more for political than for scientific purposes. It is understood that a succeeding volume will contain answers to inquiries sent to specialists throughout the world.

THE Clarendon Press will shortly publish a collection of letters from Ricardo to Malthus, which will form an interesting and important contribution to the history of economic thought. The letters will be edited by their discoverer, Mr. James Bonar, the able writer of the recent volume on Malthus and his work. There are eighty-eight of them, covering the years from 1810 to 1823. They are private and informal discussions of the subject in which the correspondents were interested, sometimes based on previous oral discussions, sometimes written in answer to letters from Malthus to Ricardo, of which, unfortunately, none have as yet been found.

A great variety of topics is touched in this correspondence, the currency, the foreign exchanges, and the corn laws being more prominent in the earlier letters, while in those of later date the problems of distribution and of value come to the foreground. Much light may be expected from them on the development of Ricardo's thought and on the interpretation which Ricardo himself would have wished to put on certain much disputed points in his theories. Although there is comparatively little about private affairs in the letters, they yet serve to throw light, also, on Ricardo's personality, in regard to which there has been not a little misconception among those writers on the history of economics who are disposed to cut loose entirely from his doctrines.

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PROFESSOR H. S. FOXWELL, the editor of the late Professor Jevons's *Investigations in Currency and Finance*, is now editing, and will publish in the course of the winter, part of an unfinished treatise on political economy, on which Jevons was engaged at the time of his death. Hardly more than a fragment of the contemplated work was left in such a state as to admit of publication. But this fragment, which was to have formed the first book of the treatise, contains that part of it which would probably have been most interesting and significant to economists. Jevons began his exposition with a discussion of consumption, and with a description and analysis of the structure of the social body. It is not entirely without precedent to approach the subject from this point of view; yet it is unusual, and points to a mode of presenting

economic principles which is likely to prove beneficial, and to be frequently adopted in the future. In the hands of an acute and original thinker like Jevons, it cannot fail to be suggestive and instructive.

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THE legislation of Germany for the compulsory insurance of laborers against accident, of which the details may be learned from the appendix to the present issue, has now been put fully into operation. Some information as to its working is given in the two reports for 1885 and 1886 which the Imperial Insurance Bureau, itself a creature of this legislation, has laid before the Reichstag, and which are published in the Bureau's *Amtliche Nachrichten* of May 1, 1886, and March 15, 1887, respectively.

The first report, for 1885, gives an account of the preparatory steps by which the Bureau was kept busy during the first year of its activity, the chief of them being the organization of the *Berufsgenossenschaften*, which are the insuring bodies. By the close of September, 1885, the organization of fifty-seven of these associations had been carried so far that the act of 1883 for insurance against accident could go into effect. The second report, for 1886, notes the final steps in the organization of the *Berufsgenossenschaften*, which can hardly be said to have begun to exercise their functions before the beginning of that year. A certain number of associations were moreover added in 1886, so that at its close there existed sixty-two, embracing in round numbers 233,000 establishments and insuring against accident over 3,100,000 workmen. In addition, some 265,000 persons employed in public works have been brought substantially within the scope of the act.

During the last quarter of 1885, 268 accidents, on account of which indemnities were due, occurred, and 18,146 marks were paid in indemnities. During the year 1886, when the act fairly went into operation, a provisional statement gives 10,414 as the number of accidents for which indemnities were paid. Of these accidents, 2,394 had brought about disability lasting from three to six months, 3,636 had caused a partial disability of permanent duration, 1,701 had caused complete and permanent disability, and 2,683 were fatal. The indemnities paid during 1886 amounted to 1,764,704 marks.

No statement of the financial accounts of the *Berufsgenossenschaften* has yet been made, except for the first quarter of their operations, from October 1, 1885, to January 1, 1886. During that quarter, it seems that the running expenses amounted, in round numbers, to 573,000 marks, to which should be added 10,000 marks for certain expenses in investigating accidents, holding courts of arbitration, and the like. In addition, a sum of nearly 400,000 marks was laid out for the expenses of first organization. In the course of the discussions which have arisen in Germany on the operation of the act, it has been alleged that the running expenses of the *Berufsgenossenschaften* are unduly high, and that insurance by them costs more than similar insurance by private insurance companies had cost. On the other hand, in two articles in the official organ of the associations, *Die Berufsgenossenschaft*, of March 25, 1887, the conclusion is reached that insurance under the act is cheaper than private insurance. The reports of the Insurance Bureau as yet fail to give materials for a fair consideration of this point, and it remains to be seen whether the machinery of compulsory insurance is more cumbersome and expensive than is warranted by the results it achieves.

IN A recent address, Sir Bernhard Samuelson expressed the opinion that the trade of the United Kingdom is now carried on "more and more upon a cash basis." The extent to which this opinion prevails has led the *Economist* to make some investigations, showing results which, although not wholly decisive, tend to confirm the general belief, and are by themselves not a little curious.

Passing by a rather marked decline in the London clearings, which may come either from fewer bills or from fewer checks, the receipts of the inland revenue from stamps on bills of exchange and promissory notes show a remarkable decline, as follows:—

Year ending with March, 1883,	. . . . .	£757,918
" " " 1884,	. . . . .	745,101
" " " 1885,	. . . . .	698,950
" " " 1886,	. . . . .	653,354
" " " 1887,	. . . . .	641,399

As a part of this decline at any rate must be caused by the known decline of prices of many commodities and the smaller amounts for which the bills required to move a given quantity of merchandise have to be drawn, the number of stamps sold becomes important. This has also fallen off in the years named, though in a less proportion. The number of stamps for bills and notes is as follows : —

Year ending with March, 1883,	. . . .	8,401,877
“ “ “ 1884,	. . . .	8,456,649
“ “ “ 1885,	. . . .	8,243,997
“ “ “ 1886,	. . . .	8,036,429
“ “ “ 1887,	. . . .	7,930,791

This indicates a falling off of five and one-half per cent. in the number of bills annually created in the course of the last five years.

To the same effect is the result of an examination of the returns of deposits and discounts of forty-six joint-stock banks, which happen to separate in their returns their discounts of bills from loans or advances on collateral. The figures stood at the close of 1882 and of 1886 respectively as follows : —

Deposits.		Discounts.	
1886.	1882.	1886.	1882.
£169,511,724	£157,661,952	£52,892,330	£56,969,152

In the aggregate, these banks have largely increased their business, as the increase of deposits shows ; but there has also been a notable falling off in their investments in mercantile paper. In England as in the United States, the mass of credit operations gains largely ; but to this gain the regular course of ordinary business does not contribute by the creation of commercial paper in equal proportion. There, as here, such paper is declared to be “scarce.”

## PROPOSED TARIFF LEGISLATION SINCE 1883.

During the last two congresses, several attempts have been made to secure modification and reduction of the customs duties as they were left by the act of 1883. A recapitulation of the propositions made and of the action thereon is interesting and suggestive, in view of the present condition of the tariff question and its present political relations.

The first session of the Forty-eighth Congress lasted from Monday, December 3, 1883, to Monday, July 7, 1884. The Democrats were in a decided majority in the House, having 198 members, against 126 Republicans and Independents.\* The contest over the speakership was sharp, and resulted in the choice of Mr. Carlisle, of Kentucky, who represented the tariff-reduction wing of the Democrats, his principal opponent being Mr. Randall, a Pennsylvania Democrat. Mr. Morrison, of Illinois, was appointed chairman of the Committee of Ways and Means.

On the 4th of February, 1884, Mr. Morrison introduced a tariff bill† in the House of Representatives. It proposed an average reduction of 20 per cent., but with so many exceptions that it was estimated the average reduction on dutiable articles would be about 17 per cent. The rates under the Morrill Act of 1861 were to form the minimum limit. An extensive addition to the free list was proposed, including the following articles: ores of iron, copper, lead, and nickel, coal, lumber, wood, hay, bristles, lime, sponges, indigo, coal tar, and dyewoods. The bill was to take effect July 1, 1884.

Having been read twice, this bill — the “Morrison horizontal,” as it was called — was referred to the Committee of Ways and Means, where it was thoroughly discussed and somewhat changed, all the articles being removed from the free list except salt, coal, lumber, and wood. The reductions in the revenue proposed by the bill as reported to the House, Tuesday, March 11, amounted to \$30,000,000. The majority

\* These figures were changed later to 201 and 123 respectively by the unseating of 3 Republicans. There was one vacancy.

† H. R. 4416.

of the committee reporting the bill was strictly Democratic, the two Republican members reporting adversely.

On Friday, March 21, a conference of "free trade" Democratic leaders was held, at which it was decided to call a general party caucus on the following Tuesday, to decide what action should be taken on the bill. At this caucus, which was attended by all but 10 Democratic Representatives, it was voted, 114 to 57: first, that the bill should be considered; second, that it should be passed, if possible; and, third, that the vote of the caucus should not be binding upon an individual member "except so far as he might be influenced by the expressed opinion of a majority of his associates." The result of the caucus was unsatisfactory to the "tariff reformers," as revealing strong opposition to the bill within the party.

On Tuesday, April 15, the motion to go into Committee of the Whole, for the consideration of the tariff bill, was carried without division. Upon the assembling of the committee, Mr. Eaton, a Connecticut Democrat, objected to the consideration of the bill; but the motion to proceed was carried by a vote of 140 to 138, 6 Republicans voting in the affirmative and 49 Democrats in the negative.\*

On the following dates, April 15, 16, 22, 23, 24, 28, 29, 30, May 1, 2, 5, and 6, the bill was debated by the House in Committee of the Whole. The principal speeches were made by Messrs. Morrison, Hurd, Hewitt, Blackburn, Belmont, Mills, Blount, Vance, and Clay in favor, and Messrs. Kelley, Randall, Russell, McKinley, Hiscock, Dingley, Eaton, Findlay, and Kasson in opposition. The debate being closed Tuesday, May 6, the Committee, on motion of Mr. Converse, an Ohio Democrat, voted, 156 to 151, to strike out the enacting clause. Immediately after, the House concurred in this action by a vote of 159 to 155, 10 not voting. The majority included 118 Republicans† and 41 Democrats; the minority, 4 Republicans and 151 Democrats. Of the 41 Democrats who voted to kill the bill, 12 were from Pennsylvania, 10 from Ohio, 6 from New York, 4 from California, 3 from New Jersey,

\* This is the latest vote in the House favorable to the consideration of a general tariff bill.

† Independents included.

and 1 from Illinois, Connecticut, Virginia, West Virginia, Maryland, and Louisiana respectively. The 4 Republicans\* voting for the bill were all from Minnesota.

The "Morrison horizontal bill" having been thus killed, Mr. Hewitt, a New York Democrat and a member of the Ways and Means Committee, on May 12 introduced a new tariff bill, † providing for a reduction of 10 to 20 per cent. on a considerable number of articles and placing several others on the free list. This bill was much less objectionable from the point of view of the protectionist than the Morrison bill, and, moreover, was intended to meet the charge brought against the latter of not discriminating. The Hewitt bill was referred to the Committee of Ways and Means, which, by a strict party vote, reported it favorably to the House, June 24. The adjournment of Congress shortly after, on July 7, prevented further consideration of the bill.

At the same session of Congress, three attempts at special tariff legislation are worthy of notice: (1) the Converse ‡ wool bill, to restore the duties of 1867 on raw wool, which was defeated Monday, April 7, by a vote of 126 to 119, 80 Republicans and 39 Democrats voting in favor of the restoration and 12 Republicans and 114 Democrats against it; (2) the amendment by Mr. Cox § to the shipping bill, for the free importation of iron and steel steamships to be employed in the foreign trade, which passed the House, but was defeated in the Senate; (3) Mr. Hurd's || bill, reducing the duty on works of art from 20 to 10 per cent., which was defeated by a vote of 179 to 52, most of the Southern and Western "free traders" voting against the bill because it was not of a general nature and applied to luxuries.

During the short session of the Forty-eighth Congress, which lasted from December 1, 1884, to March 4, 1885, one matter is deserving of notice; namely, the introduction of a bill in the Senate, January 5, 1885, by Senator Beck ¶ of Kentucky, providing for the appointment of a general Revenue Commission, consisting of Senators, Representatives, and the

\* Messrs. Nelson, Strait, Wakefield, and White.

† H. R. 6970.

‡ Ohio Democrat.

§ New York Democrat.

|| Ohio Democrat.

¶ Democrat.

Secretary of the Treasury, for the purpose of finding out what changes in the tariff were desirable. The bill was referred to the Finance Committee, where it appears to have ended its career.

In the Forty-ninth Congress, which met for its first session Monday, December 7, 1885, the House consisted of 184 Democrats and 140 Republicans, the Democratic majority of the preceding Congress having decreased nearly one-half.\* Mr. Carlisle was again elected Speaker, and Mr. Morrison was re-appointed at the head of the Ways and Means Committee. President Cleveland, in his message to Congress, called attention forcibly to the surplus revenue and the desirability of reducing the taxes on the necessities of life. Secretary Manning also, in his report, urged a radical revision of the tariff, advising a removal of the duties on many raw materials, and calling special attention to such duties as had been levied originally to offset internal taxes which have been removed since.

On Monday, February 15, 1886, Mr. Morrison introduced a bill,† which was read and referred to the Committee on Ways and Means. It was expected to reduce the revenue by about \$20,000,000,—one-half of this on sugar, one-fourth on articles placed on the free list, and the other fourth on articles reduced. The proposed free list included hemp, jute, coal, salt, iron, lead, and copper ores, corn, chiccory, oats, hay, potatoes, wood, and lumber. It was proposed to make a reduction on coarse cottons from 40 to 35 per cent. *ad valorem*, on pig iron from \$6.72 to \$5.60 per ton, on steel rails from \$17 to \$12.50 per ton, on window glass about 20 per cent. The bill was less extreme than the "Horizontal bill" of 1884. The average reduction proposed, moreover, was considerably less than the 20 to 25 per cent. recommended by the Tariff Commission of 1882. The main object of the bill appeared to be the relief of the manufacturing industries. Its author declared that he intended in the bill to give the Democrats an opportunity to stand by the tariff plank in their platform of 1884.

On Tuesday, March 23, the Committee of Ways and Means voted to allow hearings on the effect of the bill till March 12.

\* There was one vacancy.

† H. R. 5576.

The supporters of the measure held that this was unnecessary, as sufficient testimony had already been taken in the hearings before the Tariff Commission and in the discussion over the "Horizontal bill." During the discussion in the committee, it was found desirable to make radical changes in the bill as introduced by Mr. Morrison, inasmuch as it was clearly seen that the opposition from the metal and coal interests was sufficiently strong to destroy all chance of consideration in the House. Accordingly, it was found preferable to make the duties on wool and woollens the special point for assault. In accordance with this change of base, Mr. Morrison, supported by seven of his associates,—namely, Messrs. Mills, Hewitt, McMillin, Harris, C. R. Breckinridge, Maybury, and W. C. P. Breckinridge,—and opposed by five,—namely, Messrs. Kelley, Hiscock, Brown, Reed, and McKinley,—on April 12 reported a substitute bill,\* which, by vote of the House, was referred to the Committee of the Whole.

In the new Morrison bill, the free list included only lumber, wood, fish, salt, flax, hemp, jute, and wool. The tax on sugar was reduced but 10 per cent.; the duties on woollens were lowered to 35 per cent. *ad valorem*.† It was estimated that the bill would cut down the revenue about \$25,000,000, distributed as follows:—

Free list (lumber, salt, wool, etc.), . . . . .	\$7,097,000
Cottons (reduced), . . . . .	369,000
Hemp, flax, and jute (reduced), . . . . .	931,000
Woollens (reduced), . . . . .	11,565,000
Sugar (reduced), . . . . .	5,088,000
Total, . . . . .	<u>\$25,050,000</u>

The supporters of the bill held that the proposed reduction in the revenue was moderate, inasmuch as the net surplus for 1885 had been \$30,000,000.

Nothing was done with this bill until Thursday, June 17, when Mr. Morrison moved that the House go into Committee of the Whole for the consideration of revenue bills. The ayes and nays were called; and the motion was defeated, 140 to 157, 27 not voting. The minority was composed of 4 Republicans

\* H. R. 7652.

† For other reductions proposed, cf. Table V.

and 136 Democrats, and the majority of 122 Republicans and 35 Democrats. Of the 4 Republicans voting to consider, 3\* were from Minnesota and 1† from New York. Of the 35 Democrats who voted against consideration, 10 were from New York, 8 from Ohio, 5 from Pennsylvania, 4 from Louisiana, 3 from New Jersey, 2 from Illinois, and 1 from Maryland, Alabama, and California respectively. No further attempt to take up the bill was made in the first session of the Forty-ninth Congress, which closed Wednesday, August 4, 1886.

In the second session, Mr. Morrison, on Saturday, December 18, 1886, again moved the consideration of revenue bills, and was again defeated,—149 to 154, 19 not voting. Of the members failing to vote, 10 are known to have favored consideration and 8 to have been opposed to it, so that, including these, the majority amounted to 3. An analysis of the vote shows that the minority consisted of 6 Republicans (2 ‡ from Massachusetts and 4 § from Minnesota) and 143 Democrats, and the majority of 128 Republicans and 26 Democrats.¶ Of those Democrats who opposed consideration, 7 were from Ohio, 5 from New York, 5 from Pennsylvania, 4 from Louisiana, 2 from New Jersey, 2 from Illinois, and 1 from Alabama.

The other attempts at general tariff legislation in the Forty-ninth Congress were the Hewitt, Randall, and Hiscock bills. The first of these, which was introduced in the House February 1, 1886, and referred to the Committee of Ways and Means, pertained especially to administrative reforms.¶ Its principal features were embodied in the Morrison bill as finally reported by the committee.

The Randall bill,\*\* introduced June 28, 1886, and referred to the Ways and Means Committee, was intended to present the protectionist method of reducing the revenue. It proposed the removal of all internal taxes on tobacco, cigars, snuff, fruit, brandies, and spirits for use in the arts, and the reduction of some customs duties. It placed lumber, jute butts, and bristles on the free list, and slightly lowered the

\* Messrs. Nelson, Strait, and Wakefield.      † Mr. James.

‡ Messrs. Stone and Hayden.

§ Messrs. Nelson, Strait, Wakefield, and White.

¶ For vote in detail, cf. Tables I. to IV.      ¶ H. R. 5010.      \*\* H. R. 9702.

duties on iron, steel, boards, lead, zinc, bagging, and salt. Mr. Randall estimated that the bill would cause a decrease of \$34,000,000 in the revenue receipts, of which over \$8,000,000 would be tariff reduction. The committee reported the bill adversely July 10, declaring that it would cause no decrease in the customs duties, but an increase of \$5,500,000. Mr. Randall afterwards proposed a substitute for this bill, adding to the free list such articles as beeswax, nuts, and potash.

The Hiscock bill\* is of special interest as being most in line with the kind of tariff legislation that we may expect to see favored by the friends of protection for adoption in the Fiftieth Congress. It provided for the removal of the internal taxes on tobacco and methylated spirits, and for a heavy reduction of the duty on sugar, at the same time proposing the payment of a bounty to the American producer of this article. This bill, introduced in the House January 8, 1887, by the present Senator from New York, was referred to the Ways and Means Committee, in which body it was killed.

No special tariff bill of the last session of the Forty-ninth Congress deserves notice, except, possibly, the Dunn Free Ship bill, which was reported favorably to the House by the Committee on Shipping, 7 to 6. The majority consisted of 7 Democrats, and the minority of 5 Republicans and 1 Democrat. The bill was lost in the House.

Between the two votes in the Forty-ninth Congress on the question of considering the Morrison bill, a general election was held, in which the tariff was an important issue. Both the protectionists and the free traders asserted that the advantage was theirs, but an impartial analysis of the figures seems to point to a division of gains and losses. If we compare the vote in December with that in the preceding June, we find that those favoring tariff reduction gained 2 in the Middle Atlantic States, 2 in the New England, and 8 in the Western, and lost 3 in the Southern; while their opponents lost 2 in the New England States, 3 in the Middle Atlantic, and 1 in the Pacific, and gained two in the Southern. In the Pacific States, those favoring a reduction had no votes in either June or December.†

O. H. PERRY.

\* H. R. 10415.

† Cf. Tables I. to IV. for other suggestive comparisons.

TABLE I.  
VOTE BY PARTIES ON THE MORRISON BILLS OF 1884 AND 1886.

	1884.				June, 1886.				December, 1886.			
	Yes	No.	Not Voting.	Totals.	Yes	No	Not Voting.	Totals.	Yes	No.	Not Voting.	Totals.
Repub- licans,	4	118	4	126	4	122	13	130	6	128	0	134
Demo- crats.	151	41	6	198	136	55	14	185	143	25	13	181
Totals.	155	159	10	324	140	157	27	324	149	154	13	316

In each case, "yes" means in favor of reduction of duties, and "no" means opposed to it.

TABLE II.  
REPUBLICAN VOTES FOR REDUCTION OF DUTIES.

State.	1884.	June, 1886.	December, 1886.
Massachusetts . . . . .	None.	None.	2
New York . . . . .	"	1	None.
Minnesota . . . . .	4	3	4
Totals, . . . . .	4	4	6

TABLE III.  
DEMOCRATIC VOTES AGAINST REDUCTION OF DUTIES (1) BY STATES  
AND (2) BY SECTIONS.  
(1)

States.	1884.	June, 1886.	December, 1886.
Connecticut, . . . . .	1	None.	None.
New York, . . . . .	6	10	5
New Jersey, . . . . .	3	3	2
Pennsylvania, . . . . .	12	5	5
Maryland, . . . . .	1	1	None.
West Virginia, . . . . .	1	None.	"
Virginia, . . . . .	1	"	"
Alabama, . . . . .	None.	1	1
Louisiana, . . . . .	1	4	4
Ohio, . . . . .	10	8	7
Illinois, . . . . .	1	2	2
California, . . . . .	4	1	None.
Totals, . . . . .	41	35	26

(2)

Sections.	1884.	June, 1886.	December, 1886.
New England, . . . . .	1	None.	None.
Middle Atlantic, . . . . .	23	10	12
Southern, . . . . .	2	5	5
Western, . . . . .	11	10	9
Pacific, . . . . .	4	1	0
Totals, . . . . .	41	35	26

TABLE IV.

ENTIRE VOTE BOTH BY STATES AND BY SECTIONS IN THE HOUSE  
OF REPRESENTATIVES, IN 1884, JUNE, 1886,  
AND DECEMBER, 1886.

States.	No. of Rep's.	1884.			June, 1886.			December, 1886.		
		Yes.	No.	Not Voting.	Yes.	No.	Not Voting.	Yes.	No.	Not Voting.
Maine, . . . .	4	None.	4	None.	None.	4	None.	None.	4	None.
New Hampshire,	2	"	2	"	"	1	1	"	1	1
Vermont, . . .	2	"	2	"	"	2	None.	"	2	None.
Massachusetts,	12	3	9	"	1	10	1	4	7	1
Connecticut, .	4	2	2	"	2	2	None.	1	2	1
Rhode Island, .	2	None.	2	"	None.	1	1	None.	2	None.
New England,	26	5	21	"	3	20	3	5	18	3
New York, . .	34	14	19	1	7	26	1	10	22	None.
New Jersey, .	7	None.	7	None.	None.	7	None.	None.	6	1
Pennsylvania,	28	"	27	1	3	22	3	1	25	2
Delaware, . .	1	1	None.	None.	1	0	None.	1	None.	None.
Maryland, . .	6	3	3	"	4	2	"	5	1	"
West Virginia,	4	2	2	"	3	1	"	3	1	"
Middle Atlantic,	80	20	58	2	18	58	4	20	55	3
Virginia, . .	10	5	5	None.	8	2	None.	7	2	1
North Carolina,	9	6	2	1	6	1	2	7	1	1
South Carolina,	7	6	1	None.	5	1	1	5	1	1
Georgia, . . .	10	9	None.	1	10	None.	None.	9	None.	1
Alabama, . . .	8	8	"	None.	6	1	1	6	1	1
Florida, . . .	2	1	1	"	2	None.	None.	2	None.	None.
Mississippi, .	7	4	1	1	7	"	"	7	"	"
Louisiana, . .	6	4	2	None.	2	4	"	1	4	1
Texas, . . . .	11	10	None.	1	11	None.	"	10	None.	1
Arkansas, . .	5	5	"	None.	5	"	"	5	"	None.
Kentucky, . .	11	9	1	1	10	1	"	10	1	"
Tennessee, . .	10	8	2	None.	7	1	2	7	3	"
Southern, . .	96	75	15	5	79	11	6	76	13	7
Ohio, . . . .	21	3	18	None.	3	18	None.	3	16	2
Indiana, . . .	13	8	4	1	9	4	"	9	3	1
Illinois, . . .	20	7	12	1	7	11	2	8	12	None.
Michigan, . .	11	6	5	None.	6	4	1	7	4	"
Wisconsin, . .	9	6	3	"	1	3	4	2	6	"
Minnesota, . .	5	4	1	"	3	1	1	4	1	"
Iowa, . . . .	11	4	7	"	1	7	3	4	7	"
Missouri, . .	14	14	None.	"	10	2	2	11	1	2
Kansas, . . .	7	None.	7	"	None.	6	1	None.	7	None.
Nebraska, . .	3	"	2	1	"	3	None.	"	3	"
Colorado, . .	1	"	1	None.	"	1	"	"	1	"
Western, . .	115	52	60	3	40	60	14	48	61	5
California, . .	6	2	4	None.	None.	6	None.	None.	5	1
Oregon, . . .	1	None.	1	"	"	1	"	"	1	None.
Nevada, . . .	1	1	None.	"	"	1	"	"	1	"
Pacific, . . .	8	3	5	"	"	8	"	"	7	1
Totals, . . .	825	155	159	10	140	157	27	149	154	19

TABLE V.

CERTAIN CHANGES PROPOSED BY THE MORRISON AND RANDALL  
BILLS OF 1886, TOGETHER WITH PRESENT RATES.

Articles.	Present Rates.	Morrison Bill, 1886.*	Randall Bill, 1886.†
Cottons, coarse	2½c. per yard.	2c. per yd.	2½c. per yd.
"    fine	6c. " "	5c. " "	6c. " "
Cotton Thread .	7c. " dozen.	6c. " dozen.	7c. " dozen.
Flax . . . . .	\$20 to \$40 per ton.	Free.	\$20 to \$40 per ton.
Hemp . . . . .	" " " " "	"	\$25 per ton.
Jute . . . . .	\$15 per ton.	"	Free.
Bagging . . . .	40%.	30%.	35%.
Cordage . . . .	2½ to 3½c. per lb.	1½ to 2½c. per lb.	2½c. per lb.
Oil-cloth . . . .	40%.	30%.	35%.
Wool . . . . .	10c. per lb.	Free.	10c. per lb.‡
Woollen Cloth .	{ 35c. per yd. + 35	35%.	{ 30 to 35c. per yd. +
	to 40%.		35 to 40%.
Flannels . . . .	{ 10 to 24c. per yd.	"	{ 10 to 24c. per yd. +
	+ 35%.		35%.
Carpets . . . .	{ 25 to 45c. per yd.	"	{ 25 to 45c. per yd. +
	+ 30%.		30%.
Sugar . . . . .	1½ to 3½c. per lb.	10% reduction.	1½ to 3½c. per lb.
Salt, in bulk . .	8c. per cwt.	Free.	4c. per cwt.
Salt, in packages	12c. " "	"	10c. " "
Fish . . . . .	1c. per lb.	"	½ to 1c. per lb.
Lumber . . . . .	20%.	"	Free.

\* As reported from Ways and Means Committee.  
† Mr. Randall's substitute for H. R. 9702.  
‡ Duty in reality increased, owing to the provision in regard to dirt in the wool.

TABLE VI.  
FREE LISTS.

Morrison Bill, 1884.*	Morrison Bill, 1886.*	Randall Bill, 1886.†
Lumber . . . . .	Lumber . . . . .	Lumber . . . . .
Salt . . . . .	Salt . . . . .	Jute . . . . .
Coal . . . . .	Jute . . . . .	Wool . . . . .
" . . . . .	Wool . . . . .	Fish . . . . .
" . . . . .	Fish . . . . .	Hemp . . . . .
" . . . . .	Hemp . . . . .	Flax . . . . .
" . . . . .	Flax . . . . .	" . . . . .
" . . . . .	" . . . . .	Bristles . . . . .
" . . . . .	" . . . . .	Beeswax . . . . .
" . . . . .	" . . . . .	Potash . . . . .

\* As reported from Ways and Means Committee.  
† Substitute for H. R. 9702.

## THE MONETARY SYSTEM OF HOLLAND.

[The following paper, by Professor H. B. Greven, of Leyden, was read before the economic section of the British Association at Manchester, September 7, 1887. It is to appear in connection with the forthcoming report, which Mr. Edward Atkinson has been commissioned to make for the State Department, on the present state of bimetallism in Europe; and it is to Mr. Atkinson's courtesy that the opportunity of presenting the report here is due.

The paper will be found to be a valuable chapter in the monetary history of our time, and records an important example of the maintenance of silver at par with gold, by the familiar expedient of a limitation of quantity effected by the suspension of silver coinage.]

Our monetary history since 1873 presents some very interesting features. Until that date, we had the single silver standard. Owing to the changes in Germany and the countries in the north of Europe, which had passed over to the single gold standard, the coinage of silver was suspended in the spring of 1873; and since that time we have been in a very curious position for two years. Silver could be no longer brought to the mint; and gold coin could not be issued, because Parliament could not agree on the weight to be given to the gold piece, and rejected all proposals for introducing a gold standard. We possessed a fixed quantity of silver coins, and their value was regulated neither by the variations of gold in the market nor by those of silver. In fact, the value of our florin was quite independent of any metal, and depended only on supply and demand. Now, the demand for coin was increasing in the years 1873 to 1875; and the result was that, while silver as a *metal* was going down in the market, our silver *coins* were appreciated as against gold. The rate of exchange on London, which oscillates now on the gold basis between 12.1 and 12.3 florins for a pound, shrank to 11.12 florins. We could not possibly remain in that unnatural position; and so in 1875 a gold piece was issued, coined at the ratio of fifteen and five-eighths parts of silver against one of gold. Since that time, our monetary system can be described, in the words of Mr. Cernuschi, as that of the "*étalon double*

*boiteux*," — the double standard, but crippled in so far as the coinage of silver is forbidden. The value of the florin solely depends on the variations of gold, but the coins in circulation are most of them tokens. They are legal tender for all payments. A silver florin cannot possibly be of less value than that of one-tenth part of the gold 10-florin piece, but their intrinsic value is fifteen to twenty per cent. less.

Thus the only way of extending the specie circulation is the coining of gold. Some £6,000,000 of gold coin have been issued since 1875, but we were not sure to keep them in the country. Our position, indeed, had considerable dangers. When the balance of international payments required export of specie, the gold coin only could be used for that purpose without loss. Had the bankers sold our silver florins in the London market, they would have lost the difference between the intrinsic value and the mint value.

Now, for some years after the introduction of the gold coinage, all went well. The Netherlands Bank was always willing to pay its bank-notes in gold, when the gold was needed for export; but it was very difficult to get any gold for circulation in the country itself. It was a wise policy, this. The silver specie served its purpose *there* equally well; and, our stock of gold being very small in comparison with the whole of the specie, we ought to keep as much of it as possible ready for foreign demand. (I say equally well, because the silver pieces did not circulate in greater number than the public required, and fully covered bank-notes were used for payments of greater amount.) The danger of this to our monetary situation appeared in the years 1881 and 1882. The balance of trade turned against us, and the stock of gold ran down to some £600,000; while the silver specie, whose value was appreciated artificially, consisted of about £30,000,000, when we bring into account also the silver in the colonies. Unless some remedial measure had been taken, the confidence that payment in Dutch florins was payment in gold would have been lost; and in a short time the gold coins would have sold for more than their nominal value. In other words, there was great danger of an *agio* of gold; and it ought to be prevented at all cost. The question was how to effect that result with

as little cost as possible. Of course, we could have melted down a part of our silver coins, and so diminished the circulation, and brought the rates of exchange below the exportation point. Government was prepared to bear the loss on the operation, but only when it was absolutely necessary. An act was passed in April, 1884, which gave powers to the Chancellor of the Exchequer for authorizing the bank to sell at market prices a quantity of 25,000,000 silver florins, when the state of the currency requires it. Since then, every banker knows that, when he needs gold for export, and the bank cannot pay in gold, it will give him so much silver as will enable him to buy a quantity of gold equal in value to so many gold coins as the notes offered for payment represent. In that manner, confidence was entirely restored. Nobody now has the least doubt that an *agio* of gold has become impossible.

This legislative measure has cost us nothing at all to this day, as rates have all along been favorable to our country; and the bank has been able to secure a stock of gold, amounting in the preceding months to about £5,000,000. Thus, without any cost to the treasury, we have been able to maintain our currency on the gold basis ever since 1875. And I wish to add that we have done it without any serious disturbance in the bank rate. It can no doubt be maintained that the rates have been somewhat higher than they ought to have been, if our currency had consisted only of gold. The directors of the bank cannot consider the silver in their vaults as a basis of the emission of bank-notes in just the same way as they do consider the stock of gold. Perhaps, even at a lower rate of interest, the nominal value in florins of their specie and bullion would have been quite sufficient for their own safety. But, as they wished to pay in gold for export any quantity asked for, this consideration has come in, in their decision concerning the rates. Still, industry and commerce did not complain of this state of affairs. They did not consider it too high a cost for the maintenance of our currency system; and I think you Englishmen will agree with them, when I tell you that the rate of interest on bills, two and one-half per cent., has now been absolutely constant since May, 1885, for a period of more than two years. This compares favorably, it

seems, with the numerous alterations in the rate of the Bank of England.

Now, I propose to add a few words about the monetary relations of our colonies with the mother country,—a subject that will specially interest you, because of the very serious disturbances in your trade with India since the beginning of what is usually called the depreciation of silver, and would in my opinion be more truly called the appreciation of gold. I cannot deny that we met with difficulties also, but they were of quite another character. Your Indian mints have been open for silver all the time. Holland, on the contrary, has adopted the gold standard for the colonies since 1877. *You* have a different standard in Europe and in India: *we* have got the same. Our Indian florin is a *gold* florin. Indian prices are gold prices. Gold does not circulate at all in Java. Indeed, there is scarcely any gold in the colonies; and still all these silver florins have the same buying power as so many pieces of gold, containing each one-tenth of our 10-florin gold piece,—that is to say, their value is about twenty per cent. above the intrinsic value. So great is the power acts of Parliament have on the value of coins, supposed only, that the supply of them is limited. You will understand, from what I just said, that by the unity of the standard in the kingdom in Europe and in our Indian domain we escape all the difficulties arising from great and sudden variations in the rate of exchange, that give you so much trouble. The exchange is always at or about par, just as rates between London and Edinburgh or New York and New Orleans. Our difficulties arise from another cause. Your exports from India have been stimulated: our export trade from Java has been impeded. The producers of coffee, sugar, and other tropical products, sell their goods in the European market for a diminished price; while many of the elements of their cost of production, and the burden on their estates and manufactories, in so far as they are working with borrowed capital, remain the same, or at any rate do not go down so soon as the prices of the produce. Their margin of profits has disappeared in many cases. They have not been able to repay in due time the working capital they had borrowed from the financial compa-

nies, and some of them had to be wound up. But all those difficulties, very real and serious as they are, do result in the last resort from the decrease of prices,—in other words, from the appreciation of gold; and most of the competent men in our colonies are agreed that we ought to bear them rather than to break the unity of currency over the whole of our European and Indian territory.

These are the main features of our monetary history for the last fifteen years. Our situation is far from satisfactory: it is in the highest degree artificial, and we are constantly on the watch for making such changes as will make the intrinsic value of all our legal tender coins to correspond to the mint value. How that will be effected will entirely depend on the course of the international negotiations, now pending for many years, for the adoption of a common standard of value. So long as there is any hope that the great commercial nations will come to an agreement for steadying the ratio of exchange between the precious metals,—whatever that ratio may be,—and for using them both all over the world, there is no reason for changing our present system. But, should the case for silver become hopeless, we should be among the first to exchange our silver for gold at whatever cost, although we would deplore such a change very much, for the manifold evils arising from a further appreciation of gold and for the irregularities and the injustice that would result from it in the distribution of wealth.

## CORRESPONDENCE.

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### THE ECONOMIC MOVEMENT IN ENGLAND.

CAMBRIDGE, September, 1887.

IN England, for the last quarter of a century, the movement of economic thought has been one of steady and continuous evolution. The later stages of this development do not differ in any very marked way from the earlier ones, except that the rate of advance has increased, while its direction has become more obvious and unmistakable. In attempting, therefore, to give some account of these more recent changes in economic opinion, it will be convenient to begin with a brief sketch of the general movement of which they form the latest phase.

Twenty-five or thirty years ago, English political economy had attained its zenith of popularity and authority, though perhaps at no period in its history was such a position less deserved. It was resting on its laurels, showing no signs of growth or fruit, and indeed supposed by its chief expositor to have almost reached finality; but it was secure in public esteem on account of the commercial prosperity which set in with the second half of the century, and which was popularly attributed to the policy inaugurated in 1846, and it easily carried off honors to which the impartial historian will say that it had but a slender claim. It is true that it had in 1844 placed the English currency upon a footing which was at least honest and solvent. But there was conspicuous want of foresight in the fixity, in face of an expanding trade, of the regulations imposed by Peel's Act, as well as a characteristic limitation in its conception of the objects currency regulation should have in view,—two fatal shortcomings, the bitter effects of which have caused this much boasted legislation to be now estimated at a very modest value. And against whatever must on this score be placed to the credit of English economics we have to set its inability to read the signs of the

times, and its opposition to some of the most successful movements of the century. In its spirit, it was strongly materialistic, sacrificing national welfare to the accumulation of individual wealth. Some of its writers carried capitalism so far as to deplore high wages as a calamity comparable in its effects to a bad harvest. Worst of all, it was distinctly unmoral (a more serious defect than immorality, which provokes a reaction), inasmuch as it claimed that economic action was subject to a mechanical system of law, of a positive character, independent of and superior to any laws of the moral world. It is not surprising that all that was best in the literary, artistic, and spiritual worlds rose in revolt and ultimately brought about a contempt for economic teaching, which has unfortunately persisted in many quarters after the just grounds of offence have been removed.

It will be understood that what has been said of the political economy of this time refers to the dominant school, to the writers and thinkers who represented economics as a national and political force. There were never wanting at any time in the century those who had not bowed the knee to the economic Baal; but, with one exception, their voices were powerless or overpowered. The exception, of course, is Mill, the central figure of the transition; susceptible to all the newer influences, but drawn by his over-regard for the authority of a narrow though able clique to adhere to the older forms of expression. Had Mill's education been more scientific and less literary, he might possibly have shaken off these restraints. As it was, he merely put new wine in the old bottles, to the irreparable injury of his logical reputation. His merit is rather political than economical. He rightly seized the importance of the great movement of his time,—namely, the gradual rise of the working class; and he is so absorbed by it that it gives a unity to his great work, and elevates it almost to the dignity of an epic. But, though he thus gave some animation to the dry bones of the old theory, he could not infuse into them any principle of growth. We must look elsewhere for the causes of theoretic advance.

Perhaps the most effective of the influences which gave a new direction to economic study was that exercised by the

rough but inexorable logic of events. When in 1874 the easy flow of prosperity was checked by the demonetization of silver, the glamour cast by this prosperity on the so-called "orthodox" doctrine passed away with it, and the authority of pure commercialism received a severe blow. If we except the question of tariffs, the main tendency of English legislation had for some time involved a reflection,—not of course on any real conclusions of scientific theory, but certainly on the dogmatic maxims which were palmed off as scientific "laws" by the *doctrinaires*. Two great steps have been taken in this century towards the reorganization of industry. One of them is the gradual growth and recognition of the trade societies, built up by a patient persistence, and managed in general with a practical moderation, which entitle those who founded them to the highest rank among the pioneers in the elevation of their class to industrial equality and political consideration. The other is the factory legislation, that lasting monument of the humanity and good sense of the then governing classes. Both these movements were supposed to "violate" economic law. They were condemned by the teaching of the economists, and succeeded in the teeth of their strong opposition. Other legislation proceeding in the same direction has made public provision for education, ordinary and technical, and tends to revive many of the functions of control and guarantee formerly discharged by the guilds. Where there has been reason to suppose that unrestricted bargaining would be to the public hurt, bargains have been regulated. Adulteration Acts, Licensing Acts, Railway Commissions, and last, but not least, the Land Commissions have all qualified rights, which Adam Smith regarded as part of the divine order and the orthodox school held to be the condition of economic prosperity. Private enterprise was dwarfed by the new power of the companies; and Proudhon's paradox, that perfect competition results in monopoly, was seen to be merely a terse expression of undeniable facts. The working classes deliberately revolted against competition, and adopted co-operation, with such success in the limited but important field of distributive industry that their example was quickly followed by others. And on all hands there was

a remarkable revival of the corporate feeling, the most striking instance of which is to be seen in the enlarged powers and heightened energy of the great municipalities. The drift of affairs and its bearing on the old economy could not be mistaken. Everything bore witness to the waning sufficiency of pure individualism and to the gradual development of corporate action and public control. The teaching which was supposed to be summed up in the doctrine of *laissez faire* fell into hopeless discredit. The extent of this discredit may be measured by the fact that the ablest organs of the press, when discussing practical economic questions, will even now often state that such and such is the teaching of political economy, but that this is a case where, in the interests of humanity and common sense, "economic law must be set aside." Misconception could scarcely go further than this or be more fatal to the influence of the economist, but it was not altogether the fault of the public. It was the natural result of the way in which the teaching of the old school contrasted with the exigencies of society and the current of events.

When things are at their worst, they begin to mend. As the power of economic orthodoxy declined, the more progressive influences gained strength. It had been possible to ignore or to suppress men like Sismondi, Cournot, Richard Jones. But Marx, Jevons, and Cliffe Leslie, each quickly created a school. Freed from its cramping fetters, economics fell into line with the other sciences, and shared in the general movement of European thought. In the confusion of the first revolt against authority, it appeared for the moment as if all was antagonism, as if science had been replaced for war of opinion. But it is now clear that the antagonism was mainly due to misunderstanding, and that economic development has really been the result of an advance in three directions, due to three independent, but not opposing agencies. It has been the joint product of theoretic criticism, historical method, and humanistic feeling.

The first corrections which economic theory received in England were rather negative than constructive. They were prompted by the obvious discord between the supposed results of the science and the facts of every-day experience. Thus,

the absurdities of the old wage-fund doctrine, with its corollary of the powerlessness of trades-unions, were exposed by writers like Longe, Sargant, and Cliffe Leslie. Others, among whom Mr. Macleod deserves mention, did much to call attention to the internal contradictions in the received theory. And Cairnes did especially good service in disentangling the science from the dogma which had encrusted it, by clearly distinguishing between political maxims and economic laws. Two publications, both English, though one is also transatlantic, mark epochs in this line of advance. The first serious shock to the old doctrine was given by Mill's concessions to Thornton: the first substantial consolidation of the new appears in the *Wages Question* of General Walker.

But the great advance recently made by theory is not so much due to removal of contradiction, internal or external, suggested by logic or by facts, as to the use of the powerful and essentially scientific instrument of mathematical analysis, practically introduced into English economics by Jevons, in his original and masterly *Theory of Political Economy*. To the influence of this book, and of the teaching of Professor Marshall, who had previously revived and extended the analysis of Cournot, English economics owes a stimulus the full effects of which can scarcely be measured, but which it would be difficult to overrate. It has introduced continuity and precision for the first time into economic reasoning; it has shown how hopelessly the old theory fell below the ordinary scientific standard; it has overhauled the whole system of definitions and assumptions; it has been full of suggestion, both as to unobserved truths and as to the exact limits and best expression of those already observed; it has given organic unity to the science; and, most valuable service of all, it has made it henceforth practically impossible for the educated economist to mistake the limits of theory and practice or to repeat the confusions which brought the study into discredit and almost arrested its growth.

The second of the influences which have determined the recent development of political economy is so conspicuous, so powerful, so emphatically the characteristic influence of the age, that it has somewhat put into the shade the other co-

operating agencies, and has often been wrongly taken to stand for all that distinguishes the new economy from the old. The historic feeling, taking the term in its widest sense, the grasp of the idea of social evolution, with all the consequences which this implies, is certainly an influence of the very first importance in the new movement. Its strength has been derived from three independent lines of study. To the original stimulus resulting from general historical and legal research, as we find it in the works of men like Austin, Sir Henry Maine, and Cliffe Leslie, we must add not merely the influence of biological study, as interpreted in its social analogies by Comte, Spencer, and Darwin, but also the parallel influence of the German metaphysical development, acting on economics partly through the socialistic criticism of Proudhon and Marx, partly by its direct stimulus to constructive work at the universities.

The nature of the change brought about in modern economics by this historical feeling need not here be considered at much length. It has been the subject of endless discussion, and the readers of this journal have had the question most ably and authoritatively laid before them. But, generally, it may be said that, whereas the older school of English economists contented themselves with deducing, more or less loosely, the consequences which would follow on a given set of assumptions,—partly ideal, but supposed in the main to correspond to the facts and institutions of the age, and to be in some sense “natural,” or common to all ages,—the new school take comparatively little interest in the deductions, because they hold that the facts have not yet been carefully observed, that the assumptions have only a remote relation to the facts, that the facts themselves are in process of evolution and change, and that the nature and direction of this social evolution are a far more important object of study than elaborate and complicated deductions, too delicate for practical use, as to the action of economic forces in any particular actual or assumed stage of this evolution. It follows that writers of the historical school are strongly anti-*doctrinaire*; that is, they oppose arrogant and universal dogmatism resting upon crude reasoning and a limited basis of observation. For such doc-

trinairism, they would substitute a method of detailed inquiry, treating each important case on its merits. They would replace the speculative word-play of 1820-40 by statistical inquiry and historical research. At the same time, they are not in any necessary antagonism to economists of the mathematical type. If they only knew it, the mathematical economists are their most effective supporters. There is no greater safeguard against the misapplication of theory than the precise expression of it. No writers have been so truly historical in their use of theory as those who, like Cournot and Jevons, have known its exact limits. If there is a real difference between the two groups, it is rather in regard to the relative value they would assign to theory in the solution of practical difficulties. But this difference exists almost as strongly between the individuals in either group as between the groups themselves taken as a whole; and, in any case, it is a difference of degree rather than of antagonism, and should not seriously disturb the harmony of the economic world.

There is a third economic influence, not infrequently confounded with the historical, but which deserves to be clearly distinguished from it, not only on account of its well-marked individuality, but still more on account of its growing and resistless political power. It may be described as the moral and humanistic criticism of our economic life and institutions. It is concerned with ideals, as the pure theorist is with hypothesis and the historian with fact. It is a form of economic thought which has always been powerful in England. One memorable manifestation of it led to the abolition of slavery; another carried through the factory legislation; a third tried in vain to reverse the new poor-law reform; and a fourth, in which Kingsley, Maurice, Mr. Hughes, and the Christian Socialists generally, took part, attempted with partial success to introduce the principle of industrial co-operation. The strength of this school of writers lies in their opposition to materialism and in their healthy estimate of the real objects of existence. Their weakness is that they sometimes allow reason to be overbalanced by emotion, and in such cases sow the seeds of a greater misery in the future from their sensitive desire to relieve the undoubted misery of the present. Their

attitude towards competitive capitalism is, in general, a hostile one. They have doubts as to the sufficiency and invariably beneficent action even of the most perfect competition; they are still less inclined to respect the actual scramble and struggle for existence which passes for competition. They, therefore, even more than the writers of the historical school, are apt to regard themselves as in antagonism to the theoretical economist. But here, too, the antagonism is only partly real, and is mainly the result of a misunderstanding. If the theorist, the historian, and the moralist keep strictly within the bounds of their several inquiries, they will aid and not conflict with each other; and the best proof of this is to be found in the fact that there are economists in most countries, as, for example, General Walker in the United States, Jevons and Professor Marshall in England, whom it would be difficult to refer specially to either school. Indeed, the period under review has been as much marked by the convergence of the three lines of inquiry we have noticed as it has been by their separate appearance and individualization.

After this brief review of the general character of English economic development and analysis of the three main lines on which it has proceeded, we may now consider the progress which has been made in each direction during the last few years. As before, it will be impossible to describe the movement of thought without some reference to the course of affairs. It is true that legislation has affected to advance in independence of economic teaching. But it has not been able to free itself from the influences which have been forming economic opinion; and, if it has sometimes ostentatiously set aside the advice of economists, the results have been such that latterly the disposition to ask for such advice has visibly strengthened. In any case, it is impossible to ignore the mutual interaction of thought and affairs.

To take the intellectual movement first, it has been marked rather by the formation of opinion than by the direct extension of science. No work of the same calibre has appeared since Jevons's *Theory of Political Economy*; but the standard of economic instruction has been raised in a remarkable degree, and the amount of interest and activity in economic

study is greater than at any previous time in our history. Among living writers there is no one who has done so much to bring about this advance as Professor Alfred Marshall. His modest little treatise on the *Economics of Industry*, published at a critical time, was extremely useful in reconstructing the science which had been so rudely assailed. Its theory of value, saturated with the spirit and the best results of mathematical thought, was yet accessible to the mass of readers, who were repelled by the symbolic form of Jevons's work; while, in its handling of practical questions, it showed that a theorist need not be a materialist or a *doctrinaire*, and it gained for economics the forfeited respect of the abler artisans. But Professor Marshall's personal and indirect influence has been even more wide-spread than his book. Half the economic chairs in the United Kingdom are occupied by his pupils, and the share taken by them in general economic instruction in England is even larger than this. Most of these pupils have also passed under the influence of Professor Sidgwick, and have benefited, not merely by the unrivalled critical power of which his *Principles of Political Economy* gives proof, but still more by his teaching as to the essential unity of the Moral Sciences, and his admirable exhibition of the relation of economics to the adjacent moral and political studies. The Cambridge Moral Sciences Tripos, which in its present form is very largely due to Professor Sidgwick's untiring elaboration, is, in a sense, a monument to this side of his economical influence. At Oxford, Mr. Thorold Rogers maintains, almost single-handed, and with world-wide reputation, the historical repute of English economists. He has just added to his well-known works on the history of English Agriculture and Wages a sketch of the first nine years of the Bank of England. In the opinion of many, this able monograph is the most brilliant of his yet published writings. No economist before, except Jevons in his remarkable essay on Cantillon, has shown the same power of making details significant, and of awakening the past until it becomes more living and interesting than the present itself. But work of this sort, valuable as it is, perhaps because of its very permanence, does not color contemporary opinion or found a school. Of recent Oxford men, Arnold

Toynbee went nearest to exerting an influence of this kind, if, indeed, he did not actually achieve it.

It is difficult adequately to describe, to those who have not personally known him, this unique figure among English economists. Sensitive, intensely sympathetic, altruistic almost to asceticism, his intellectual being seemed to rest, like a thin transparent crust, upon a deep suppressed sea of emotion; and at times, when his usually pale, chiselled features were lit up with a flash of insight or an eager, eloquently expressed conviction, he seemed like one inspired, and he certainly inspired in no ordinary degree those with whom he came in contact. It was a character and an influence which does not lend itself to classification. Perhaps Toynbee was least interested in pure theory, most in matters of morality and conduct. But he warmly sympathized with every branch of economic inquiry, and had a particularly firm grasp of the essential principles of the science affecting industrial questions. Nothing, indeed, was more remarkable in him than the unwonted combination, with great vividness and fluency of expression and an enthusiastic, lofty temper, of a clear grasp of theory and infinite patience for detail. It will easily be understood that the influence of such a man, though necessarily cut short and limited by his early and tragic death, was extremely strong within the circle to which it reached. It has been preserved and extended by the formation of Toynbee Hall and the Denison Club, both of them founded to promote that spirit of personal service and direct sympathy with the weaker and less fortunate classes which was so strong in Toynbee himself. Toynbee Hall, designed to bring young men face to face with social problems by planting them in a poor and neglected quarter of London, and to focus attention and train effort which might otherwise be scattered or misdirected, has so far been a powerful factor in English opinion. It has already given rise to a number of imitations, each doing good service in its way; but, in most of these, the philanthropic spirit has clothed itself in distinctive forms, which make it difficult to distinguish the social aim from the ordinary religious propagandism. The more economic tendency of Toynbee's influence is better traceable in the humanized policy of charity organization, in the

new attitude of Oxford to the Co-operative and University Extension movements, and in the tone of the press, which is largely guided by Oxford men.

In the world of business and statistics, no name stands higher than that of Mr. Giffen, the present head of the Statistical Department of the Board of Trade. Mr. Giffen's knowledge of English business and finance is extremely wide, and his grasp of statistical facts is unrivalled. No one finds his way so surely through the snares and intricacies of official returns, and there is no English statist whose results are studied with more interest and respect. As Mr. Giffen's bias does not incline towards rashness or unnecessary change, he is more frequently found moderating than leading in proposals for economic reform. But in another respect his influence has been both marked and progressive. He has perhaps done as much as any living writer to replace speculation by statistics and to introduce the historical method in the treatment of questions of the day, while he has distinctly extended economic theory in the departments of banking and finance.

Space will only permit of a very inadequate notice of what is being done by the numerous other writers dealing with economical studies. Mr. Edgeworth has made, and is still continuing, a very elaborate and able series of papers on statistical methods and other points of abstract theory. Professor Nicholson, besides valuable writings on the land and other questions, has made effective contributions to the theory of money, and to the cause of bimetallism, which is rapidly gaining ground in this country. Mr. P. H. Wicksteed is specially devoting himself to the development of theory on the lines of Jevons's method of final utility. The merits of this method, which are so generally recognized in Holland and Austria, have been more fully appreciated of late in England. Mr. Patrick Geddes continues the biological influence, and has done good service by criticising economic methods and results in the light of the latest biological analogies. Excellent historical work has been done by Mr. Bonar in his volume on Malthus, by Mr. Cunningham in his *Growth of English Industry and Commerce*, by Mr. Stephen Dowell in

his *History of Taxation*, and by Mr. Hubert Hall in his *History of the Customs Revenue*; and much attention has been paid by various writers to the history of banking in general, and especially to the history of banking in Scotland and the part played in it by the £1 note.

It is not, however, by an enumeration of works of this class that we can adequately measure the activity and importance of economic thought in England during recent years. The great bulk of the literature which it has put forth is neither academic, theoretic, nor historic, but is concerned directly with practical questions; and much of it is ephemeral in its form, though not in its effects. The land question in all its manifold aspects has been pressed to the front. The chronic Irish difficulties, the increase of population, the fall of prices, and high farming have all made some modification of the old *régime* imperative. The net result is that, if the present Land Transfer bill becomes law, scarcely a shred of the old feudal tenure will remain. Land will have been completely commercialized; and occupying ownership, though necessarily a luxury in a country where land sells for thirty to forty years' purchase, will probably become rather the rule than the exception. Meanwhile, it is certain that the short-sighted policy pursued in regard to Irish land has sown a strong leaven of socialism throughout the entire kingdom, more especially in Wales and the Highlands of Scotland. The most serious sign of this is probably the tithe agitation in England. It is impossible to ignore the fact that the obligation of contracts, where they relate to land, is sensibly impaired. The new doctrine seems to be that a land contract may be repudiated if, owing to change of circumstances, it is inconvenient to one of the parties. If this limp and plausible principle should obtain increased acceptance, and be extended to the sphere of ordinary business and finance, the results will be somewhat startling.

Next to the land question, the prolonged trade depression has attracted most notice. It is not denied by any one now that there has been a heavy drag on industrial progress ever since 1874, resulting in a greatly lessened rate of increase of capital, profits, and wages, and in a generally severe pressure

on all classes. The agricultural interest has suffered most; but the artisans have borne their share, and the funds of the trade societies have been drained very low; while, as usual, there has been much misery among the weak and shiftless class which lies on the margin of pauperism. The prolonged nature of the depression has powerfully stimulated inquiry. It has led to the appointment of three important commissions, and to other less official investigations. A great and needed impulse has been given to technical education, and the whole question of apprenticeship has been rescued from the neglect it suffered during the reign of *laissez faire*. There has been a wide-spread revival or creation of trade and professional guilds, and great municipal activity in providing artistic and other instruction. The Commission on Trade has led to the result which every economist foresaw. It has found the main cause of the universal depression in the fall of prices, and a Currency Commission is still investigating this latter question. But those who advocated the Commission on Trade are understood to have expected recommendations of a very different sort. The industrial disturbance caused by the constant increase in foreign tariffs has roused very bitter feeling in many parts of the country. The half-ruined farmers and landlords are complaining of the unequal competition with Indian wheat, and probably nothing but the peculiar character of our land system has prevented the imposition of a moderate duty on corn. At any rate, the belief in free trade is somewhat less confident and rigid. The fair-trade agitation of 1849 has been revived with considerable success. List's *National System of Political Economy* was translated into English in 1885; and an active, clever propaganda has been maintained by the Fair Trade League for some years, under the direction of Mr. Eckroyd. Whether this movement, so long as it was confined to purely commercial considerations, would ever have achieved any substantial success, may be doubted. But it is much aided by the remarkable growth of English national feeling. Imperial federation is one of the most influential movements of the day. It is warmly supported by the press, spoken of by both political parties with respect, and taken up with enthusiasm by the younger generation. It is

true that there is an equally strong set of opinion in favor of a certain kind of decentralization, owing to the growth of municipal feeling and the increasing weight of public functions. But the federation principle is rather complementary than antagonistic to reasonable decentralization. However this may be, it is impossible to ignore the strength of the new national feeling. We seem already to be separated by a whole age from the "Perish India" period. And, whether or not nationalism will leave its mark on our tariffs, we cannot doubt that it will influence our legislation and foreign policy.

Nothing better illustrates the difference between the old and new schools of economics than the history of recent English opinion on the currency question. Ten years ago, any one who professed himself a bimetallist would have been scouted as plainly ignorant of elementary principles of political economy. The few remarks devoted by Mill to the currency system of half the commercial nations show that he did not even seize its main idea. In the true spirit of Ricardianism, it was generally held that the normal value of the monetary metals depended solely on their cost of production. The influence of demand was wholly ignored, and consequently a system which was based on an automatic adjustment of demand to the variations of supply was regarded as an attempt to interfere with "natural" prices and to "violate economic law." All this is now altered. It is admitted by all competent persons that the real questions at issue are very narrow and difficult; that they do not concern economic law or the conclusions of theory, but depend upon differing estimates of obscure facts, or of future events, or of the balance of mercantile and general convenience. Instead of being burlesqued as an elementary blunder in theory, bimetallism is now treated as a serious and practicable proposal for dealing with admitted difficulties. But the commission is not likely to adopt heroic measures. English monetary opinion is conservative, and the present course of prices is not unfavorable to the moneyed interest. It is possible some palliatory measures may be recommended; as, for instance, an issue of £1 notes, which, besides offering several direct advantages, would greatly facilitate any further and more radical change.

Passing to recent industrial movements and the state of opinion in reference to them, it may first be observed that there has never been a time at which the artisan classes wielded so much political power as at present. Thanks to their trades-unions and the sensible action of their Parliamentary Committee, there is now a compact body of labor members in the House. The influence of this group is great and increasing, far in excess of that due to its size. One of its members held an under-secretaryship in the last government; another ranks among the most respected men in Parliament. The new Labor Bureau of the Board of Trade, to which Mr. Burnett, the able Secretary of the Amalgamated Engineers, is attached, promises under Mr. Giffen's direction to be of extreme value; and it is one sign of the importance attached by government to working-class interests. In fact, it is hardly too much to say that the influence of the artisans has displaced that of the middle class as the dominant political force. So far as the opinion of this class can be gathered from the written expressions of its leaders, it would seem still to be distinguished by its soberness and practical sense. Most of the proposals advocated are practicable and detailed. They ask for further development on tried and approved lines. This is observable, for instance, in the papers at the Industrial Remuneration Conference in 1885, and in the annual reports of the trades-unions and their Parliamentary Committee. Of late years, a slight shade of Marxism may be detected in some of these documents; but, on the whole, the imported socialism of a certain class of London and semi-foreign labor does not seem to have taken any great hold on the abler and more responsible artisan leaders. They are very far from being revolutionary, and they have nothing to gain from revolution. They desire more direct political representation and more attention on the part of government to industrial questions. They have suffered severely from irregular employment, and some still work under injurious conditions and receive wages forced down by unequal contracts. But they do not aspire towards a semi-military state organization of industry. They desire ultimately to control their own industrial enterprises, or at least to share in their control. Co-operative

production has not yet taken a considerable position in English industry; but it is an ideal towards which progress is being made, and which is never lost sight of. Meanwhile, some steps towards industrial stability are being made by the use of sliding scales, valuable accounts of which have lately been given by Professor Munro and Mr. Price; and there is no reason why the principle of profit-sharing, so ably advocated by Mr. Sedley Taylor, and so successful in France, should not gain greater acceptance here.

It is rather among the middle classes that socialistic theories are most discussed. Mr. H. George's land proposals and the recently translated *Capital* of Karl Marx both found sympathizers in this social stratum. They were well calculated to appeal to the somewhat *dilettante* enthusiasm of those who were educated enough to realize and to be revolted by the painful condition of the poor, but not patient or hard-headed enough to find out the real causes of this misery, nor sufficiently trained to perceive the utter hollowness of the quack remedies so rhetorically and effectively put forward. A number of socialistic periodicals and organizations mark the new tendency of this class. With few exceptions, however, the periodicals are weak; and the organizations, as usually happens, in their rapid propagation by fission, pay an unconscious homage to the principle of individualism. More important than this socialism of culture is the change in the attitude of the Christian Churches. They are, undoubtedly, becoming more democratic and socialistic. The attitude of the Roman Church in Ireland may be regarded as exceptional. But it is not very different from that of the ministers in Wales and the Scottish Highlands. There is also a revival of Christian Socialism in London, as witness the writings of the warden of Toynbee Hall, and the newly founded Methodist *Times*. Much of this influence, though here classed as socialistic because it invokes the corporate action of society and qualifies the rights allowed by individualism, is, of course, non-revolutionary in its method. It is mainly founded on a remarkable development of sympathy with the poorer classes, due to a keener moral sense, and to wider publicity and larger franchises, through which these classes are now better known.

The development of art, too, has not been without its effect in recalling men from commercialism to consider the simple, eternal ends of life and the ideal conditions of healthy existence. Mr. Ruskin, in particular, has been a great economic force, as readers of his writings will not require to be told; and Mr. William Morris is another example of the socialistic leaning of the artistic temperament. Upon the whole, public opinion is becoming increasingly sensitive to social suffering and to social needs. The new aspirations find expression in such work as that of charity organization, improving the dwellings of the poor, providing accessible recreation, and bringing the best instruction to the doors of the masses of the people. All this cannot fail to increase our knowledge of the causes of misery, at the same time that it calls out and reinforces the motive power necessary to deal with them. Tending, as it does, to stimulate the economic imagination and to incite to patient research, the apparent reaction against economic teaching will prove, in the long run, to have greatly aided its reconstruction and widely extended its influence.

Nothing, indeed, can well be more promising than the present outlook for economic science in this country. In spite of a little superficial and formal difference between its expositors, they are in substantial agreement as to the method and treatment of the study. Different relative values may be assigned by different economists to theory, history, and statistics; and there is a certain difference as to social ideals and as to the best means of realizing them. But, when we come to specific results and to actual researches, the disagreement is really less than in most other studies. If the present writer, after an exceptionally large experience in examining, may venture to single out the writers who seem to have most influenced serious students in this country, he would be inclined to name General Walker, Professor Marshall, Jevons, Dr. Sidgwick, Cliffe Leslie, Mr. Ruskin, and the German socialists. And nothing is clearer than that, whatever apparent discordance there may be between the various members of this group, the new school of economy can and does assimilate the best part of the teaching of them all, without any sense of inconsistency or contradiction. The position of this school in England is

not very different from that maintained by Professor Wagner in Germany or that laid down by the editor of this journal in his introductory article. To the present writer, it seems, however, that Professor Dunbar in describing the new school characterizes it by its extreme wing rather than by its centre, and consequently hardly does justice to the importance of the change of attitude. He regards the movement as a conflict between the supporters of the deductive and inductive methods. No doubt, this has been stated in so many words by some of the new school; but it does not represent their practice and their real meaning. Mr. Thorold Rogers, for instance, thus states his own view in the preface to his new book: "Speculative political economy has been a most dangerous guide; nothing but inductive economy is to be trusted as an interpreter of facts. We are as yet in the infancy of that phase of the science." But it is clear that Mr. Rogers has no quarrel with the deductive method. He uses it freely and often with signal success in this very work. It is speculative and not theoretical economy which is to be condemned. Induction is a necessary part of this theoretical economy, and no doubt theoretical economy of a really scientific kind largely remains to be written. Of pure theory proper, Jevons is almost the only English representative. There is no quarrel with such theory, nor with its inductive basis.

What the new school protest against is: first, the unscientific and meagre way in which deduction was used; secondly, the unwarrantable dogmatism with which this loose "deduction" was applied to practice; thirdly, the exaggerated estimate of the importance of theory, even when applied with the greatest care. In their view, though it is worth while to study, and therefore worth while to study accurately, the workings of private interest under a system of competition, yet human nature is not all self-interest, real or fancied, nor is the social structure wholly competitive. They have quite done with the old notion, that a positive science of economics can be constructed, which even in the industrial sphere can be independent of morality and justice, purely rigid and mechanical in its principles. Every one can see that *laissez faire*, formerly a foregone conclusion, is now scarcely even a presump-

tion. But this is only half the change. It is the mechanical, unmoral economics, even more than the policy of *laissez faire*, which the new school has banished to Saturn. The state, said M. Thiers, in a famous and memorable passage, must act as an honorable man would act. The new school hold, what is quite as important, that a man must act as honorably in his industrial capacity as he would in his private relations. They will not allow him, by pleading "the state of the market," to excuse himself from the ordinary obligations of humanity. With the old school, the worst scandals were calmly referred to "demand and supply," as though such a reference were final. With the new school, if the conditions of the market are such as to lead to injustice or to swell the mass of social wreckage, these conditions must be overhauled, and as far as may be rectified. It is their decided conviction that, if competition is to remain the basis of economic relations, society must see that it is so held in check that it shall not violate the older and deeper principles of justice and humanity.

Such a change of view is surely of the highest significance; and, as it has been gradually realized by the English public, the effects have been most marked. The philanthropic feeling, the artistic aspirations, the moral enthusiasm, which a generation ago concentrated themselves in an attack on materialistic economy, now gladly co-operate with economists, and seek their advice. There is a general awakening of interest in the study. Social and economic unions are springing up in all parts, particularly in the university towns. In Oxford and Cambridge, the University Extension movement, originated by Professor Stuart, is largely based upon economic and social interest, and in its turn has greatly contributed to give a practical tone to the younger economists, and to put them in sympathy with the industrial classes. In Scotland, the economic revival is equally patent. Edinburgh has its Social Union, Glasgow and other towns their economic societies; and the University Extension movement is already set on foot north of the Tweed.

With us as with you, the desire is everywhere felt for an organization which shall unite and concentrate these new and growing interests. The Statistical Society, which celebrated

its jubilee in 1884, is larger and more useful than ever; but it prefers to confine itself mainly to work of the numerical or descriptive order. It is proposed to form an economic society which would be wider in its purposes. It would aim at the advancement of theory, at the consolidation of economic opinion, at the encouragement of historical research, and at the criticism and direction of industrial and financial policy. In time, no doubt, it would acquire a valuable library and furnish students with the necessary bibliographical aids. It might also publish a journal, undertake a series of reprints and translations, and compile a dictionary. All this is at present in the clouds. But it is scarcely doubtful that we shall shortly follow the lead so ably set us on your side of the Atlantic. Meanwhile, we heartily wish success to your association, and tender our appreciative thanks for your most admirable and welcome journal.

H. S. FOXWELL.

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## APPENDIX.

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### WORKMEN'S INSURANCE IN GERMANY.

[Prepared by F. W. TAUSSIG.]

The acts for the insurance of workmen against sickness and accidents are the most important results of the policy of social reform which has been entered on in Germany within the last few years. The discussions which led to these measures hinged at first on the amendment of the employer's liability act of 1871, whose working had not been entirely satisfactory.\* They took wider scope as the socialist agitation gave a stimulus to the idea of a conscious and regulated interference by the state for the aid of the poorer classes. A first result was in the acts of April 7 and 8, 1876, by which communes were empowered to compel workmen to join associations, either of a voluntary nature or established by the commune itself, for insurance against sickness. Communes were also empowered to compel employers to contribute to such associations sums up to one-half the amount contributed by workmen. Legislation of more stringent character was, however, strongly urged, for which the *Knappschaftsvereine* in mining industries gave a model. These associations, which have existed for centuries, and membership in which has been for many years compulsory in most German states for mine-owners and miners, insure the workmen against sickness, permanent injury, and death, by means of premiums paid by owners and workmen. The first step for a general application of this method was taken in a bill for insurance against accident, submitted to the Reichstag in March, 1881, and providing for a centralized insurance managed by an imperial bureau and for contributions from the funds of the Empire. The Reichstag amended it by putting the management in the hands of the federal states, and not of the Empire. In this form the bill was passed by the Reichstag, but rejected by the Bundesrath. A second bill was presented in 1882, providing for insurance both against sickness and against accident. That part of it only which provided for sick insurance was found acceptable, and, being taken up separately, became law on June 15, 1883. A third project for insurance against accident was presented in the following year, differing from the previous schemes in that it called for no contributions from imperial resources, and organized more carefully the associations by which, under the second

\* Some sketch of the discussion that preceded the legislation may be found in an article by G. Schmoller, "Haftpflcht und Unfallversicherung," in the *Jahrbuch für Gesetzgebung*, vol. v., pp. 249-318.

project, the insurance was to have been undertaken. The third bill finally became law, July 4, 1884. Certain supplementary acts, extending the fundamental provisions of these main acts with more or less modification to occupations not previously embraced, have since been passed, and are noted below.

A considerable body of literature has sprung up on this legislation, and several periodicals have been established to aid in its observance or operation. The Imperial Insurance Bureau issues *Amtliche Nachrichten* (Berlin), which are now in their third year; and it also gives its sanction to a semi-official publication, *Die Arbeiterversorgung* (Neuwied), which is in its fourth year. Other private periodicals are *Die Berufsgenossenschaft* (Berlin) and *Die Arbeiterversicherung* (Dresden).

We print a translation of the essential parts of the texts of the acts of 1883 and 1884. Non-essential parts are omitted; and of some parts we print, instead of the full text, an abstract, indicated by brackets.

#### AN ACT FOR THE INSURANCE OF WORKMEN AGAINST SICKNESS, APPROVED JUNE 15, 1883.\*

##### A. COMPULSORY INSURANCE.

§ 1. Persons who are employed at a salary or for wages — (1) in mines, salt works, establishments in which ores are treated, quarries, pits, factories, smelting works, railroads and river-steamships, on wharves, and in building operations; (2) in mechanical trades and in any permanent manufacturing occupation; (3) in establishments in which machines moved by steam or other natural power (wind, water, steam, gas, hot air, etc.) are used, except where there is no more than temporary use of a machine not forming part of the plant — shall be insured against sickness according to the provisions of this act, excepting those persons mentioned in § 2, paragraphs 2–6, and excepting those whose employment is from its nature temporary or limited by contract to a period of less than one week. Administrative officers (*Betriebsbeamte*) are subject to compulsory insurance only if their pay does not exceed 6 2-3 marks for every work day.

Salary or wages, in the sense of this act, shall include *tantièmes* and payments in kind. The money equivalent of the latter is to be reckoned according to the average prices of the locality.

§ 2. A commune, or an association of communes, may by ordinance extend the provisions of § 1 to: (1) those persons specified in § 1 whose employment is from its nature temporary or limited by

\* The text of this act is given in the *Jahrbücher für Nationalökonomie*, vol. vii. (neue Folge), pp. 436–452. French translations are in the *Annuaire de Législation Etrangère* for 1883, pp. 119–157, and in the *Bulletin de Statistique et de Législation Comparée*, vol. xiv., p. 90.

contract to a period of less than one week; (2) clerks and apprentices in mercantile establishments and in apothecaries' shops; (3) persons employed in transportation otherwise than as specified in § 1; (4) persons employed outside the seat of the establishment by those carrying on a mechanical trade [*Gewerbetreibende*]; (5) persons carrying on independently a mechanical trade in their own establishments, at the orders and on account of others (household industry); (6) agricultural laborers and those employed in forests. . . .

[§ 3 provides that persons employed in the public service of the empire, of one of its constituent states, or of a municipal body, at fixed salaries, are not to be affected by the act.]

#### B. GEMEINDEKRANKENVERSICHERUNG.\*

§ 4. For all persons subject to compulsory insurance, insurance takes place at the hand of the commune, unless undertaken by an *Ortskrankenkasse* (§ 16), by a *Betriebs- (Fabrik-) Krankenkasse* (§ 59), a *Baukrankenkasse* (§ 69), an *Innungskrankenkasse* (§ 73), or a registered or duly authorized *Hilfskasse* (§ 75). Persons of the kind mentioned in §§ 1, 2, 3, who are not subject to insurance, and domestic servants, shall have the right to join the *Gemeindekrankenversicherung* in the commune in which they are employed. They may join by written or verbal notice to the commune or its officers, but shall have no right to benefits in case of sickness that has begun at the time of giving notice. Those who have joined and have failed to pay the insurance contribution for two successive dates of their falling due forfeit their insurance at the hand of the commune.

§ 5. Those persons for whom *Gemeindekrankenversicherung* takes place are to be given by the commune within whose limits they are employed benefits in case of sickness, or in case of disability from work brought about by sickness. From such persons the commune shall raise sick insurance contributions (§ 9).

§ 6. There shall be granted as benefits in case of sickness: (1) from the beginning of sickness, gratuitous medical attendance, medicines, spectacles, trusses, and similar appliances; (2) in case of disability from work, for each working day, beginning with the third day after the day on which sickness begins, a sick pay of one-half of the daily pay of ordinary laborers at the locality.

These benefits shall cease, at latest, at the close of the thirteenth week after the beginning of the sickness.

The communes are empowered to make regulations whereby sick pay is to be granted only in part or not at all in cases where the sickness has been brought about intentionally, by criminal participation in

\* Insurance at the hand of the communes.

assaults and brawls, by drunkenness, or by sexual excesses; and also regulations whereby persons who are not subject to compulsory insurance and who voluntarily join the *Gemeindekrankenversicherung* are to obtain aid only at the close of a specified period after their joining,—that period, however, not to exceed six weeks.

Sick pay is to be paid at the close of each week.

§ 7. In place of the benefits prescribed in § 6, free treatment in a hospital may be given: (1) for those who are married or members of a family, with the consent of their family, or without that consent if the sickness calls for treatment such as cannot be given properly by the family; (2) for all other persons unconditionally.

If the person taken to a hospital has others dependent on him, whom he has previously supported, he is to receive in addition to free hospital treatment the sick pay provided for in § 6.

§ 8. The amount of the daily wages of ordinary laborers in each locality is to be determined by the higher administrative authorities after consultation with the communal authorities. The determination is to be made separately for men and for women, for young persons and for adults. Apprentices shall be assumed to receive the wages of young persons.

§ 9. The insurance contributions to be raised by the communes, except as otherwise provided in § 10, are not to exceed 1 1-2 per cent. of the daily wages of the locality, and are to be raised at that rate unless otherwise provided for. [Separate accounts are to be kept by the communes of the receipts and expenses for this purpose.]

If the receipts on insurance account do not suffice for the payments due from it, the deficit is to be made good from the general resources of the commune, and is to be repaid to the commune out of the insurance account, provided that the provisions of § 10 in regard to that account have been complied with.

§ 10. If the yearly accounts show that the lawful insurance contributions do not suffice to pay the lawful benefits, the contributions can be raised, with the consent of the higher administrative authorities, to 2 per cent. of the ordinary daily wages of the locality. Any excess of receipts over expenses, so far as not needed to reimburse the commune for advances made by it, is to be used for the accumulation of a reserve fund to the amount of the annual average total receipts. The contributions shall then be lowered to 1 1-2 per cent. of the ordinary daily wages of the place. If, thereafter, an excess of receipts still remains, the commune shall determine whether contributions are to be further lowered or an increase in the benefits granted is to be made. Should the commune take no action, the higher administrative authority may require a reduction of the contributions.

§ 11. If persons for whom *Gemeindekrankenversicherung* has set in leave the occupations whereby they became entitled to that insurance and do not enter an occupation in which they become by this act entitled to insurance, their right to aid shall continue so long as they continue to pay the insurance contributions, and either remain in the commune in which they formerly lived or else have their domicile in the commune in which they were last employed.

§ 12. A number of communes can agree to unite for joint communal insurance. [Detailed provisions are made for such joint action, which can also be prescribed by the higher administrative bodies.]

§ 13. If in any commune there are less than fifty persons for whom communal insurance is to take place, or if the yearly accounts of any commune show, after the increase of the insurance contributions to 2 per cent. of daily wages, that permanent supplements from the general funds of the communes are needed to pay the benefits herein provided for, such commune on its own application can be joined by the higher administrative authorities with one or more neighboring communes for joint insurance. Should these conditions take place for the majority of the communes belonging to a larger communal association, the higher administrative authorities may require that such larger communal association shall take the place of the individual communes for the purpose of sick insurance. [Sections 14 and 15 make further and detailed provisions for joint action by communes.]

#### C. ORTSKRANKENKASSEN.\*

§ 16. The communes shall have the right to establish for persons liable to insurance, who are employed within their limits, *Ortskrankenkassen*, provided that the number of persons to be insured by such association be at least one hundred. The *Ortskrankenkassen* shall be established, as a rule, for persons employed in one trade or in one class of occupations. Joint *Ortskrankenkassen* may be established for several trades, or several classes of occupations, if the number employed in the individual trades or occupations is less than one hundred.

Trades or occupations in which one hundred or more persons are employed can be united with other trades or occupations in a joint *Ortskrankenkasse* only in case the persons employed have been given an opportunity to express their wishes in regard to the establishment of the joint association. Should there be opposition, the higher administrative body is to decide as to the establishment of such joint association.

\* Local sick associations.

§ 17. The higher administrative body may require the commune to establish an *Ortskrankenkasse* for persons employed in a trade or occupation, if such action is requested by the persons concerned, and if this request, after opportunity given for the expression of opinion by all concerned, is made by more than half of these and by at least one hundred persons. A similar requirement may be made for the establishment of a joint *Ortskrankenkasse* for a number of trades or occupations, if more than one-half of the persons employed in each trade and in each occupation, and at least one hundred persons, join in the request.

[Further provision is then made for the establishment of *Ortskrankenkassen*, which are authorized in certain cases even if their membership is less than one hundred.]

§ 20. The *Ortskrankenkassen* shall provide at the least: (1) a sick pay, which is to be ascertained in the manner specified in §§ 6, 7, 8, substituting, however, for the daily wages of ordinary laborers the average daily wages of those trades or classes for whom the association is established, in so far as that average shall not exceed three marks per working day; (2) a similar payment to women in childbirth for three weeks after the birth; (3) in case of death, a payment of twenty times the average wages of day laborers in the locality, as described in § 8.

The average wages of the members of such an association may also be arranged in classes, in so far as there are differences between the wages of different members. In such case, the average daily wages in any one class shall not be fixed at more than four marks per day nor at less than the amount of the wages of ordinary laborers (§ 8).

[§ 21 provides that *Ortskrankenkassen*, if they see fit, may enlarge their benefits by extending the time for which aid shall be granted, by increasing the amount of sick pay, by granting sick pay to those who are treated in hospitals, and in other specified ways; but they may not provide for benefits to invalids, widows, or orphans.]

§ 22. The contributions to the *Ortskrankenkassen* are to be fixed at a percentage of daily wages sufficient, when added to such other receipts as there may be, to provide for the statutory benefits, running expenses, and a reserve fund as required by § 32.

§ 23. The communal authority, after a hearing of the persons concerned or their representatives, shall establish by-laws [*Kassenstatut*] for each *Ortskrankenkasse*. The by-laws shall determine: (1) the classification of the persons subject to insurance who are to be members of the association; (2) the benefits to be given; (3) the amount of the contributions; (4) the choice of the executive committee [*Vorstand*] and its powers; (5) the composition of the general meeting

and the manner in which it shall be called and shall conduct its business; (6) the manner of amending the rules and regulations; (7) the rendering and auditing of the yearly accounts. The by-laws shall contain nothing inconsistent with the objects of the association or with provisions of law.

§ 24. The by-laws of the association must be approved by the higher administrative authorities, which shall take action with regard to them within six weeks, and shall approve them unless they fail to comply with the provisions of this law. If approval is refused, the reasons therefor shall be communicated. [Provision is made for an appeal from such a decision of the higher administrative authorities.] . . .

§ 26. . . . The by-laws may further determine: (1) that members who have repeatedly defrauded the association shall be excluded; (2) that members who have brought on their sickness intentionally, by criminal participation in assaults or brawls, by drunkenness, or by sexual excesses, shall not receive the benefits or receive them only in part; (3) that a member who has received the statutory benefits for thirteen weeks uninterruptedly, or for thirteen weeks of a single calendar year, shall receive, on occasion of a new sickness, the lawful minimum of aid only if a period of thirteen weeks or more has elapsed between the granting of the previous aid and the beginning of the new sickness; (4) that persons not subject to compulsory insurance, who have become voluntarily members of the association, shall not receive aid until the end of a period not exceeding six weeks after their joining the association.

[The next sections make further provisions as to the *Ortskrankenkassen*, among others that membership shall cease when the payment of contributions has not been made on two successive dates of payment due; that members who lose their employment shall retain their right to aid from the association for a period of not more than three weeks after the time when their membership ceases; that employers who are under an obligation to make payments to the association out of their own means shall have a representation on its executive committee not exceeding one-third the number of the committee; that several communes can unite for the establishment of joint *Ortskrankenkassen*.] . . .

§ 44. The supervision of the *Ortskrankenkassen* shall be undertaken in communes of more than ten thousand inhabitants by the communal authorities; elsewhere, by such authorities as may be designated by the governments of the respective federal states.

§ 45. The supervising authority shall see that the provisions of law and of the by-laws are obeyed, and may compel obedience by threat-

ening and fixing penalties on the officers of associations. It may inspect all transactions, books, and accounts of the association, and examine the cash. It may require meetings of the officers of the association to be held, and, in case of need, may itself call such meetings. . . .

D. PROVISIONS COMMON TO GEMEINDEKRANKENVERSICHERUNG AND TO ORTSKRANKENKASSEN.

§ 49. Employers shall give notice, at least three days after employment begins, of every person employed by them to whom *Gemeindekrankenversicherung* applies or who belongs to an *Ortskrankenkasse*, and shall give notice, at least three days after the close of the employment, of such close. [Provision is made for the places at which these notices shall be given.]

§ 50. Employers who fail to give the notices required of them shall reimburse all expenses incurred in consequence of statutory provision by a commune or an *Ortskrankenkasse*, in aid of any person who shall have become sick before notice given.

§ 51. Employers shall pay in advance the contributions which shall become due, by statute or lawful regulation, to the *Gemeindekrankenversicherung* or to an *Ortskrankenkasse*, for persons employed by them. Contributions to the former shall be paid weekly, unless otherwise determined by vote of the communal authorities. Contributions to the latter shall be paid at the periods fixed by their rules and regulations. Contributions shall continue to be paid until the required notice of termination of employment has been given. Money so paid may be refunded to the employer, if the person on whose account it was paid shall have parted in the mean while from the insuring body to which the payment was made.

§ 52. Employers shall pay out of their own means one-third of the contributions due on account of persons employed by them and liable to insurance. By local ordinance (§ 2), it may be provided that employers who do not use steam-boilers or other machinery propelled by natural power, and who do not employ more than two persons subject to compulsory insurance, shall be released from the obligation to make contributions out of their own means.

§ 53. Employers shall have the right to subtract from the wages of persons employed by them the contributions which they are obliged to pay for such persons, in so far as they are not obliged by § 52 to pay such contributions out of their own means, provided that such subtractions shall be made proportionally to the wages due at any one time of payment. . . .

§ 56. The rights accruing under this act to persons entitled to benefits may not be forfeited, transferred, or pledged, and may be offset only by contributions due on account of them.

§ 57. The obligation of communes or poor law associations for the maintenance of persons in need of aid, and the rights which persons insured under this act may have by contract or by force of law, against third persons, shall not be affected by this act.

In case a commune or poor law association grants aid, lawfully required of it, for a period during which the person aided had rights by force of this act, such rights shall accrue to the commune or association to the extent of the aid granted by it. The same shall hold good of employers and associations which shall have fulfilled, under requirement of law, an obligation incumbent upon communes or poor law associations.

In case the *Gemeindekrankenversicherung* or an *Ortskrankenkasse* shall have granted benefits in a case of sickness for which the insured person had a legal right of indemnity against third persons, this claim, to the extent of the benefits granted, shall accrue to the *Gemeindekrankenversicherung* or the *Ortskrankenkasse*. . . .

#### E. BETRIEBS- (FABRIK-) KRANKENKASSEN.\*

§ 59. Associations which shall be created for one or more establishments carrying on the trades specified in § 1, and which shall provide, by contract or factory rules, for the compulsory membership of the persons employed in such establishments, shall be subject to the following provisions :—

§ 60. An employer who employs in one or more establishments fifty or more persons subject to compulsory insurance shall have the right to establish a *Betriebs- (Fabrik-) Krankenkasse*. He may be compelled, by order of the higher administrative authority, to establish such association, if a request to this effect is made by the commune in which the employment takes place or by the sick association of which the persons employed are members. Before such an order is issued, the employer shall have an opportunity to be heard ; the persons employed by him, or their elected representatives, shall have a similar opportunity ; and, should the request come from an *Ortskrankenkasse*, the commune also shall have such opportunity.

§ 61. Employers in whose works there is peculiar danger of sickness to the persons employed may be compelled to establish a *Betriebs- (Fabrik-) Krankenkasse*, even though they employ less than fifty persons. Employers employing less than fifty persons may be permitted to establish such an association, if its permanent financial sol-

\* Sick associations for particular establishments (factories).

vency is made certain in a manner satisfactory to the higher administrative authority.

§ 62. Employers who fail to fulfil the obligation to establish a *Betriebs- (Fabrik-) Krankenkasse* within a period to be determined by the higher administrative authority shall pay out of their own means for every person employed by them and subject to compulsory insurance, contributions of not more than five per cent. of the wages earned, to the *Gemeindekrankenversicherung* or to the *Ortskrankenkasse*. The extent of such contributions shall be fixed without appeal by the higher administrative authority after a hearing of the communal authorities.

[Further rules are then laid down for these *Betriebs- (Fabrik-) Krankenkassen*. The manner of making out their by-laws is determined, the provisions in regard to the *Ortskrankenkassen* being made to apply to them, with certain modifications.]

§ 65. The employers in whose establishments such associations are established shall pay out of their own means one-third of the contributions due for members by the statutes of the associations. They shall have the right to deduct from wages, at each regular payment of wages, two-thirds of the contributions due, the deduction being made proportionally to the wages then due.

In case the minimum benefits required of the association cannot be covered by contributions, after these contributions have reached three per cent. of the average daily wages or earnings of the persons insured, the employers shall pay out of their own means the additional sums needed. . . .

#### F. BAUKRANKENKASSEN.\*

§ 69. For persons employed in building railroads, canals, roads, levees, dikes, and fortifications, as well as in any other temporary building operations, *Baukrankenkas sen* shall be established, at the order of the higher administrative authority, by the persons carrying on the operations, if they employ for a continuous period of time a considerable number of workmen.

§ 70. The obligations hereby imposed upon the persons carrying on building operations may be transferred, with the consent of the higher administrative authority, to one or more contractors undertaking a part or the whole of such operations on their own account, provided such contractors give security to the higher administrative authority for the fulfilment of their obligations.

§ 71. Builders who do not fulfil the obligation imposed upon them by § 69 shall pay out of their own means to persons employed

\* Sick associations for building operations.

by them, or their representatives, the aids provided for such persons by § 20 in case of sickness or death. . . .

[Part G of the act provides for *Innungskrankenkassen*, which may be formed by incorporated associations of employers for the application of the act to their apprentices and journeymen. Part H enacts that, where associations for aid in case of sickness already exist, such as the *Knappschaftskassen* of mining regions and the registered *Hilfskassen* (friendly societies), these associations shall so modify their regulations and procedure as to conform to the provisions of the present act.]

## AN ACT FOR INSURANCE AGAINST ACCIDENTS, JULY 6, 1884.\*

### I. GENERAL PROVISIONS.

§ 1. All workmen and administrative officers (*Betriebsbeamte*) employed in mines, salt works, establishments in which ores are treated (*Aufbereitungsanstalten*), quarries, pits, on wharves, in building establishments, in factories and smelting works, shall be insured in accordance with the provisions of this act against accidents occurring in the course of their occupations. The act shall apply to administrative officers only in so far as their yearly pay or salary does not exceed two thousand marks.

It shall also apply to workmen and administrative officers employed by persons who undertake the execution of masonry, carpentry, roofing, stone-cutting, well-digging work, and to chimney-sweeps.

The establishments enumerated in paragraph 1 shall include, for the purposes of this act, all undertakings in which machinery propelled by steam or other natural power (wind, water, steam, gas, hot air, etc.) is used, excepting undertakings accessory to agriculture or forestry and not specified in paragraph 1, and excepting, also, such undertakings as employ temporarily a machine not forming part of the permanent plant.

Factories, in the sense of this act, shall mean undertakings in which a business of working at commodities is carried on (*Bearbeitung oder Verarbeitung von Gegenständen gewerbsmässig ausgeführt*), and in which not less than ten workmen are usually employed, and also undertakings in which explosives are produced in course of business.

[It is further provided that the Imperial Insurance Bureau

\* The text in German is in Supplement-Heft 10 to the *Jahrbücher für Nationalökonomie* (1884). French translations are in the *Annuaire de Législation Étrangère* for 1884, pp. 121-173, and in the *Bulletin de Statistique et de Législation Comparée*, vol. xvi., p. 216, seq.

(*Reichsversicherungsamt*) shall decide what other undertakings are to be considered factories; that the act shall apply to railroads and steamships which form an essential part of any of the enumerated occupations; that the Bundesrath may exempt undertakings in which there is no danger of accident from the obligation to insure.]

§ 2. The rules and regulations of an insuring body (§ 16, *seq.*) may extend the obligation to insure to administrative officers having a salary of more than two thousand marks a year. In such case, the indemnity is to be calculated on the basis of an entire year's pay. The rules and regulations may further determine the conditions under which an employer in undertakings specified in § 1 may insure himself, or other persons not subject to insurance by § 1, against accident.

§ 3. *Tantièmes* and payments in kind shall be considered part salary or wages in the sense of this act. The money value of articles received in kind shall be reckoned according to the local prices.

Annual earnings shall mean, unless made up of fixed sums paid at least once a week, three hundred times the average earnings per day. In those occupations in which the customary methods of work give to workmen regularly employed a smaller or larger number of working days, that number of working days shall be counted in reckoning the annual earnings.

[§ 4 provides that officers of the empire, of a federal state, or of a municipal body, having a fixed pay and entitled to pension, shall not be affected by the act.]

§ 5. The insurance shall yield indemnity for bodily injury or death, to be measured as follows. The indemnity in case of bodily injury shall be: (1) those expenses of cure which arise after the beginning of the fourteenth week from the occurrence of the injury; (2) a regular payment to be made after the beginning of the fourteenth week from the occurrence of the injury, to the person injured, during the continuance of his inability to work.

This payment is to be based upon the average earnings per day of the person injured, during the last year of his employment in that occupation in which the injury took place; but any excess of earnings over four marks is to be counted for only one-third of its amount. If the person injured has not been employed for an entire year in the occupation in which the injury took place, the average annual earnings of workmen of the same class in the same or similar occupations shall be used as the basis of reckoning. If these earnings do not reach the average local daily wages of ordinary laborers, as fixed by the higher administrative authorities according to § 8 of

the act of June 15, 1883, for insurance against sickness, this latter amount shall be used as the basis of reckoning.

The payment shall be: (a) in case of complete inability to work, 66 2-3 per cent. of the earnings, during such inability; (b) in case of partial inability to work, a portion of the payment specified in (a), to be determined according to the measure of earning capacity that remains. No right to indemnity shall belong to the person injured or his representatives, if he has intentionally brought about the accident.

[The next paragraphs provide for the accounting between the associations which have to insure against sickness by the act of 1883 and the associations which have to insure against accident by this act, for the indemnities imposed upon them respectively.]

§ 6. In case of death, the following additional indemnities are to be granted: (1) for expenses of burial, twenty times the daily earnings as determined by § 5, but not less than thirty marks; (2) a pension to be paid to the representatives of the person killed, which is to be based on earnings as defined in § 5. It shall be: (a) for the widow until her death or remarriage, 20 per cent. of the earnings; for every fatherless child within the age of fifteen years, 15 per cent.; and, if that child loses or has lost its mother, 20 per cent. of the earnings. The payments to widow and children together shall not exceed 60 per cent. of the earnings. If a higher percentage results from the above provisions, each share shall be reduced proportionally. If the widow marries again, she shall receive three times the amount of her annual pension as payment in full. No right shall accrue to the widow, if her marriage with the person insured took place after the occurrence of the accident.

(b) For parents or grandparents (*Aszendenten*) of the person killed, if he was their sole support, the pension shall be, until their death or cessation of their need, 20 per cent. of his earnings. If there be several persons entitled under (b), parents shall be preferred to grandparents. If persons enumerated under (b) and persons enumerated under (a) put in competitive claims, the first mentioned shall have rights only in case the last mentioned put in a claim for the maximum pension. Representatives of a foreigner, who were not living within the country at the time of the accident, have no claim.

[§ 7 provides that, in place of the indemnity secured by § 5, treatment in hospitals can be given under the same conditions as are enumerated in the act for insurance against sickness.]

§ 9. The insurance shall be undertaken by the employers (*Unter-*

nehmer) in the occupations mentioned in § 1, who are to be united for this purpose in *Berufsgenossenschaften*,\* which are to be formed for specified districts, and, as a rule, shall include all establishments within each district in the branches of industry for which the associations are formed.

The person on whose account the business is carried on shall be reckoned as the employer. Establishments in which are included occupations of different kinds shall be assigned to that *Berufsgenossenschaft* to which the main occupation belongs. The *Berufsgenossenschaften* can acquire rights and assume obligations, sue and be sued, under their own names. For their debts, their property only shall be liable.

§ 10. The means for paying the indemnities assumed by the *Berufsgenossenschaften*, and for paying the expenses of their administration, shall be raised by contributions which are to be fixed year by year on the basis of the wages and salaries earned in the respective establishments by the persons insured, and on the basis of the danger-tariff hereinafter provided for (§ 28). Any excess of wages or salaries over an average, during the period of contribution, of four marks per day, shall be reckoned only for one-third of such excess.

No contributions may be raised from the members of the *Berufsgenossenschaften*, nor may their property be employed, for other purposes than the payment of the indemnities imposed on them, the granting of prizes for rescuing persons in danger and for preventing accidents, and the accumulation of reserve funds. . . .

## II. FORMATION AND CHANGE OF THE BERUFGENOSSENSCHAFTEN.

§ 11. Every employer in an establishment mentioned in § 1 shall give notice to the lower administrative authorities, within a period to be fixed and publicly announced by the Imperial Insurance Bureau, of the articles produced by him and the manner of producing them. For the establishments of which no notice is given, the authorities are to gather information as they can. They shall have the right to impose a fine on employers of not more than one hundred marks for failure to give the required notice.

The lower administrative authorities shall draw up a list of all establishments in their district, arranged according to the classification of the Imperial Statistics, stating the articles produced, the manner in which they are produced, and the number of employees

\*Trade Associations.

who are to be insured. This list shall be handed to the upper administrative authorities, by whom it is to be corrected, in case of need, so as to conform to the classification of the Imperial Statistics. The upper administrative authority shall hand to the Imperial Insurance Bureau similar lists of all establishments liable to insurance within their district.

### III. VOLUNTARY FORMATION OF BERUFGGENOSSENSCHAFTEN.

§ 12. The *Berufsgenossenschaften* may be formed, with consent of the Bundesrath, by agreement of the employers. The consent of the Bundesrath may be refused: (1) if the number of establishments for which the *Berufsgenossenschaft* is to be formed, or the number of workmen employed in them, is too small to guarantee the ability of the association permanently to fulfil its obligations in respect of insurance against accident; (2) if establishments are excluded from the *Berufsgenossenschaft*, which, because of their small number or the small number of the workmen employed in them, cannot form a solvent association of their own and cannot be practicably assigned to another association; (3) if a minority opposes the formation of the *Berufsgenossenschaft* and offers to form, for specific occupations or districts, a separate association deemed to be solvent.

[§§ 13 and 14 provide for the formation of the *Berufsgenossenschaften* by general meetings of the employers, which are to take place under the supervision of the Imperial Insurance Bureau. At these meetings, every employer has one vote for any number of workmen less than twenty, one vote for every twenty additional workmen up to two hundred, one for every hundred workmen above two hundred. § 15 provides for the formation by the Bundesrath of *Berufsgenossenschaften* in cases where the employers do not form them voluntarily, or fail to comply with §§ 12 to 14 in endeavoring to form them.]

§ 16. The *Berufsgenossenschaften* shall establish at a general meeting of their members by-laws (*Genossenschaftsstatut*) for their administration and order of business. . . .

§ 17. The by-laws shall fix: (1) the name and seat of the association; (2) the manner of selecting the executive committee (*Genossenschaftsvorstand*) and the extent of its powers; (3) the calling of the general meeting of the association and the manner in which it shall act; (4) the voting powers of the members, and the inspection of proxies for voting; (5) principles on which the officers shall act in arranging the classification of the danger-tariff (§ 28); (6) the

procedure in case of changes in the establishments or changes of employers; (7) the consequences of a stoppage of work in establishments, and, more particularly, the manner of making certain the payment of contributions by employers whose establishments close; (8) the payments to be made to the representatives of the workmen for attendance at association meetings (§§ 44, 49); (9) the handing in and auditing of the yearly accounts; (10) the manner of exercising the powers hereinafter granted to the association for preventing accidents and inspecting establishments; (11) the conditions under which the by-laws may be changed.

§ 18. The *Berufsgenossenschaften* shall accumulate a reserve fund. For its accumulation there shall be levied, when the first period for the payment of insurance contributions arrives, 300 per cent. of such contributions; at the second period, 200 per cent.; at the third, 150 per cent.; at the fourth, 100 per cent.; at the fifth, 80 per cent.; at the sixth, 60 per cent.; and thereafter, until the eleventh period, 10 per cent. less at each period. After the close of the first eleven years, the interest of the reserve fund is to be added to the principal until the fund shall have reached twice the sum annually needed by the association. Thereafter, the interest of the reserve fund, so long as the reserve fund exceeds twice the sums annually needed, may be used for meeting the current obligations of the association.

Upon application of the executive committee, the general meeting of the association may at any time order further supplementary contributions to the reserve fund, and may determine that the fund shall be raised to more than twice the sums annually needed. Such determination shall require the approval of the Imperial Insurance Bureau.

In cases of stringent need, the association, with the approval of the Imperial Insurance Bureau, may use the interest of the reserve fund and even trench on the principal, before the accumulation required above. Restitution to the reserve fund shall then take place as may be required by the Imperial Insurance Bureau.

[§§ 19-27 provide for the composition of the general meetings, permit the division of the *Berufsgenossenschaften* into geographical sections, make the consent of the Imperial Insurance Bureau necessary to the validity of the by-laws of the association, require the publication of the name, seat, and officers of the association, and regulate the election and duties of the officers and trustees. Officers and trustees may not decline an election, though they may decline a re-election, and shall serve without pay.]

§ 28. The general meeting of the association shall establish rules for classifying establishments according to the danger of accident in

them, and for determining the amount of the contributions in different establishments according to a danger-tariff. By vote of the general association, the arrangement and amendment of the danger-tariff can be assigned to a committee or to the executive committee. The arrangement and amendment of the danger-tariff must have the approval of the Imperial Insurance Bureau. If the association fails to establish a danger-tariff within a period to be determined by the Imperial Insurance Bureau, or fails to get the assent of the bureau to its tariff, the Imperial Insurance Bureau, after hearing such representatives of the association as shall have been assigned the task of fixing the tariff, shall itself set up the tariff.

The assignment of establishments to the different classes in the danger-tariff shall be made by the officers of the association in the manner prescribed by its by-laws. An employer may appeal from the assignment within two weeks to the Imperial Insurance Bureau.

The danger-tariff is to be revised after a period of not more than two years, and thereafter is to be revised every five years in the light of the accidents that have taken place in the different establishments. The results of such revision are to be submitted to the general meeting of the association, with a statement of the accidents insured against in this act, that have taken place in the different establishments. The general assembly shall then act on the maintenance or amendment of the classification and danger-tariff. The general assembly can for the ensuing period add supplements to or make deductions from the contributions of employers according to the number of accidents that have taken place in their establishments. Changes in the classification or in the danger-tariff are not valid without the approval of the Imperial Insurance Bureau, and a list of accidents that have taken place shall be laid before the Bureau.

§ 29. The by-laws may provide that the indemnities, up to 50 per cent. thereof, shall be borne by the geographical sections in whose districts the accidents take place. The contributions which may thereby be imposed upon the sections shall be divided among their members in accordance with the classification and the contributions established for the association itself.

§ 30. Associations may unite for the purpose of joint action, in part or in whole, in paying indemnities. Such unions must have the consent of the general meetings of the associations concerned and the approval of the Imperial Insurance Bureau. They shall take effect only at the beginning of a financial year. Agreements of this kind must make provision for the manner of dividing the obligations jointly assumed by the associations. . . .

[§§ 31-33 regulate further the manner in which the union of several associations shall take place, determine the conditions under which particular branches of industry or establishments in a particular district may leave or enter one or another association, provide for the dissolution of associations which shall have become insolvent, etc.]

§ 34. Every employer in an establishment belonging to those branches of industry for which the association is established in a given district is a member of that association. The employer in an establishment subject to insurance at the time when this act takes effect becomes a member at that time. Employers in establishments that come into existence at a future date, or become subject to insurance at a future date, become members at those dates respectively. Every member of an association has the right to vote, provided that he has not lost his honorary civil rights (*bürgerliche Ehrenrechte*).

[§§ 35-40 make it compulsory for employers to give notice of the character, size, and number of employees, of their establishments, and of changes in their occupations or establishments; require the officers of associations to maintain lists of the members; require the associations to hand in lists of their members to the Imperial Insurance Bureau, etc.]

#### IV. REPRESENTATION OF THE WORKMEN.

§ 41. Representatives of the workmen shall be elected for every section of an association, and, if the association is not divided into sections, for the association itself, for the purpose of electing members of the board of arbitration (§ 46), for the confirmation of the regulations for the prevention of accidents (§§ 78, 81), and for participation in the election of two non-permanent members of the Imperial Insurance Bureau (§ 87). The number of representatives shall be equal to the number of employers on the executive committee of the section or association.

§ 42. The election shall be by the executive committees of the *Ortskrankenkasse* or other sick insurance association whose seat shall be within the district of the section or association, and of which at least ten insured persons, employed in the establishments of members of the *Berufsgenossenschaft*, shall be members. The representatives of the employers in the sick insurance association shall have no vote in the election. Only those male persons are eligible for election who are of age, are obligatory members of the associations created by this

act, are employed in establishments of members of the association within the district of the section or association, are in possession of the citizens' rights (*bürgerliche Ehrenrechte*), and are not by judicial order fettered in the management of their property.

[Part V., §§ 46–50, provides for a board of arbitration for every *Berufsgenossenschaft* or section. It is to consist of a chairman, who is appointed by the government of the federal state, and must be a public officer; of two members elected by the association or section; and of two more elected by the representatives of the workmen.

Part VI., §§ 51–77, regulates the manner in which indemnities shall be fixed and paid. When an accident occurs, the local police authorities make an investigation, and decide on the cause and nature of the accident, what persons were injured and the nature of their injuries, and what persons there are (widows, orphans, etc.) who may be entitled to indemnities. The executive committee of the association or section then decides what indemnities, if any, shall be paid. From their decision appeal lies to the board of arbitration, and from this to the Imperial Insurance Bureau. The indemnities are to be paid by orders on the post-office, which is to be reimbursed annually by the associations for its advances.]

§ 78. An association shall have the power for the whole of its district or for any part thereof, or for particular branches of industry, or for particular kinds of establishments, to make regulations as follows: (1) Requiring members to adopt measures for preventing accidents, under penalty of assigning them to a higher class in the danger-tariff, or, in case they are already in the highest class, under penalty of supplements to their contributions up to twice the previous amount. A reasonable period is to be allowed members for adopting the required measures. (2) Requiring the persons insured to obey regulations for the prevention of accident, under penalty of fines up to six marks.

Regulations of this kind must have the approval of the Imperial Insurance Bureau. [§§ 79–81 prescribe further details as to the manner of enforcing the provisions of § 78.]

§ 82. The associations shall have the power to supervise, through their agents, the execution of measures for the prevention of accidents, and to obtain such information in regard to establishments as may be material to membership in the association or arrangement of the danger-tariff. They may also inspect such books and lists as indicate the number of workmen employed and the amounts paid to them, for the purpose of checking the lists of workmen and wages which the employers are required to hand in. Employers belonging

to an association shall permit to the duly authorized agents of the association entrance on their premises during the hours of work and immediate inspection of their books and lists. Failure to comply with this obligation, so far as not effected by § 83, may be punished by the lower administrative authorities by fines of not more than 300 marks.

§ 83. If an employer fears that inspection by agents of the association may lead to the loss of a business secret or to any damage to his business interests, he may demand inspection by other competent persons. In such case, he shall give notice to the executive committee of the association immediately on learning the name of the agent, and shall name to the committee qualified persons who are willing, at his expense, to make the needed inspection of his establishment, and to give the required information to the executive committee of the association. Should the employer and the executive committee of the association fail to agree on a qualified person, the Imperial Insurance Bureau shall make a decision, if applied to by the executive committee.

[The following sections provide that the agents of the associations shall be under an obligation of secrecy, that their names and residences shall be publicly stated, etc.]

#### VII. THE IMPERIAL INSURANCE BUREAU.

§ 87. Compliance with the provisions of this act on the part of associations shall be supervised by the Imperial Insurance Bureau. The Imperial Insurance Bureau shall have its seat in Berlin. It shall consist of three permanent members, of whom the chairman shall be one, and of eight non-permanent members. The chairman and the other permanent members shall be appointed for life by the emperor, with the confirmation by the Bundesrath. Four non-permanent members shall be chosen by the Bundesrath from its number. Two shall be chosen by ballot by the executive committees of the associations, and two by the representatives of the workmen in separate elections, which shall take place under the supervision of the Imperial Insurance Bureau. A plurality shall elect. If votes are equal, the decision shall be by lot. The non-permanent members shall hold office for four years. The voice which the individual associations shall have in the election shall be determined by the Bundesrath, upon the basis of the number of persons insured by them.

§ 88. The Imperial Insurance Bureau shall see that associations, in the conduct of their operations, conform to the requirements of law

and of the by-laws. Its decisions shall be final, except where otherwise provided in this act. It shall have the power at any time to examine the conduct of the operations of an association. The members of the executive committee of an association, and its trustees and officers, shall submit, on demand, to the Imperial Insurance Bureau or its representatives, their books, vouchers, all correspondence relating to the contents of their books or to the determination of benefits and contributions, and all documents bearing on the determination of their benefits and contributions. They shall be liable to a fine of not more than 1,000 marks for failure to comply with such demand.

[§§ 90 and 91 regulate the procedure of the Imperial Insurance Bureau, and enact that its expenses shall be borne by the empire. §§ 92 and 93 authorize the establishment of Federal Insurance Bureaus, which may assume the functions of the Imperial Insurance Bureau for the associations lying within any federal state. § 94 authorizes special *Knappschaftsberufsgenossenschaften* on the part of those employers who are members of the *Knappschaften* of the mining regions.]

§ 95. Persons who are insured by this law, and their representatives, have a claim for injury from accident against employers, agents or representatives, superintendents or overseers, only in case these persons have been proved, in a criminal proceeding, to have intentionally brought about the accident. In such case, the claim for injury shall be only for that amount by which the compensation under existing law exceeds the indemnity secured by this act.

§ 96. Employers, agents or representatives, superintendents or overseers, of whom it is proved in a criminal proceeding that they have caused an accident intentionally or by neglect of that degree of caution which is specifically required (*besonders verpflichtet*) of them by virtue of their office, occupation, or calling, shall be liable for all expenses which shall have been incurred by a *Berufsgenossenschaft*, or sick insurance association, in consequence of this act or of the act of June 15, 1883, for the insurance of workmen against sickness. [This liability is also made to attach to joint stock companies, incorporated associations of all kinds, firms, etc., and its details are regulated.]

[The concluding sections fix fines upon employers for failure to comply with the provisions of the act, and fine or imprisonment upon officers or agents of associations for misuse of their powers.]

An act of May 28, 1885,\* extends the insurance against sickness

\* Printed in the *Annalen des Deutschen Reiches*, 1885, pp. 751-754, and translated in the *Bulletin de Statistique et de Législation Comparée*, vol. xviii., p. 87.

and accidents to workmen employed in the postal and telegraph service, on railroads, in the army or navy departments (excepting *Personen des Soldatenstandes*), in dredging, cartage, internal navigation, and transportation of all kinds, to packers, porters, 'longshoremen, etc. If the industry in which they are employed is carried on by the empire or one of the federal states, the latter takes the place of the *Berufsgenossenschaft* for the purposes of insurance against accident. If the industry is carried on by private persons or corporations, *Berufsgenossenschaften* are to be formed among them. The general provisions of the acts of 1883 and of 1884 are made to apply to these occupations, with minor modifications called for by their peculiar conditions.

Agricultural laborers had not been affected by the main acts of 1883 and 1884. An act of May 5, 1886, provides for their insurance against accident, and makes certain regulations as to their insurance against sickness. As regards insurance against accident, the principle of compulsory insurance was applied with modifications called for by the peculiar conditions of agriculture. Agriculture is frequently conducted on a small scale. The small proprietors often employ, without stipulation as to wages, members of their own families. They are apt to act themselves as employees of others. Payments in kind continue in many parts of Germany. In many cases, the employer is bound by contract or customary law to care for the agricultural laborer in case of sickness and accident. These circumstances are taken into account in the act of 1886. As the degree of danger in agriculture does not vary greatly, the *Berufsgenossenschaften* are formed geographically; and a wide discretion is left to the governments of the federated states as to their formation. Prussia, in availing herself of the liberty so granted, has made the boundaries of the *Berufsgenossenschaften* within her borders coincide with those of her provinces; while the sections are made coincident with the smaller local divisions (*Kreise*). Prussia, moreover, effects a saving of expense by intrusting the administration of the act very largely to the local authorities already in existence. Other questions are also left to be settled by the states, such as the extent to which members of the employer's family shall participate in the insurance benefits.

As regards insurance against sickness, the act does not provide for its compulsory adoption, but merely regulates certain details of its application in those cases where communes or other local bodies shall have already applied it to agricultural laborers, under the authority conferred by the act of 1883 (see § 2 of that act). It is pro-

vided, for instance, that, where an employee has a legal claim for support against the employer in case of sickness, as is the case with some members of an employer's family, insurance shall, on the employer's application, be dispensed with, and that it shall similarly be dispensed with where an employer, when sick, has a right to the continuance of payments in kind. The method by which payments in kind shall be computed as money payments is prescribed; and in other ways the manner in which local bodies shall apply insurance against sickness, if they do so at all, is regulated.

Laborers employed in building roads, railroads, canals, etc., and certain others employed on building operations, had not been affected by the insurance act of 1884 or its successors. The act of July 11, 1887, makes provision for them. All employers who carry on such operations as a regular business, unless they are already reached by a previous insurance act, are united into a single *Berufsgenossenschaft*, extending over all Germany, whose affairs are to be managed, in the main, like those of the other associations of the same kind. Laborers hired by employers who do not carry on building as a regular business, and who are not reached by a previous act, are to be insured by the employers in special insurance associations (*Versicherungsanstalten*), which are to be created for this purpose as departments of the *Berufsgenossenschaften* of the building trades. These new associations are similar to ordinary insurance companies, maintained and managed by the *Berufsgenossenschaften* with separate funds and accounts. Where a state or local body carries on building operations, it may insure for itself or may insure in these associations.

An act of July 13, 1887, extends the system of insurance against accident to sailors and others employed in shipping.

The next step in the legislation for compulsory insurance is likely to be an act granting pensions to laborers in case of old age or disability. In the periodical publication *Die Berufsgenossenschaft*, of July 10, 1887, it is stated, apparently on official authority, that a bill having this object is now in the hands of the Imperial Chancellor, and will soon be laid before the governments of the federal states. It provides for pensions to disabled or aged laborers, but makes no provision for widows and orphans. The system is to be administered by the *Berufsgenossenschaften*, by whom the pensions are also to be paid. The funds are to be raised by equal contributions from the state, the employers, and the employees, each of whom is to pay about one per cent. of wages.

In Austria, bills were introduced in 1885 by the government, providing for insurance against sickness and accident.\* They were

\* See the *Bulletin de Législation Comparée* for February, 1887, p. 196.

modelled on the German acts, though not without important differences in detail. The bill for insurance against accident was adopted by the Lower House in June, 1886, but has not as yet (September, 1887) become law. The bill for insurance against sickness has not yet come up for discussion.

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*JANUARY, 1888*

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THE ELEVENTH CENSUS OF THE UNITED  
STATES.

ON the first day of the present session of Congress, the Hon. S. S. Cox, of New York, introduced into the House of Representatives a resolution providing for the appointment of a committee on the Eleventh Census. The offering of this resolution calls attention to the near approach of another decennial enumeration, under the Constitution. It is most fortunate that the active, progressive, and enlightened statesman who framed the law of March 3, 1879, is still in Congress to apply the experience of the last census to the legislation for the next. Mr. Cox's promptitude shows that his interest in the subject has suffered no abatement.

In undertaking a discussion as to what should be done towards the performance of this most important constitutional function, it will perhaps be well to recognize the fact that the preparations for the Eleventh Census are likely to be in some degree embarrassed by the financial

and other misfortunes which befell its immediate predecessor. The successive deficiency-appropriations for that work, the delays in the publication of some of the later volumes, together with the newspaper attacks upon the Census, which became epidemical in 1882 and 1883, have created, in the minds of most of those who have any impression at all on the subject, the belief that the Tenth Census was extravagantly expensive. Yet no opinion could be more unfounded. The fact is that, considering the new ground covered, the Tenth Census was a marvel of cheapness. Even if we leave out all consideration of the great extent and variety of statistical work then for the first time undertaken, and treat all this as having cost absolutely nothing, we shall still find that the cost of the Tenth Census, per capita of inhabitants, exceeded that of the Ninth Census by far less than the ratio in which the cost of the Ninth Census exceeded that of the Eighth.\* Yet no one ever took exception to the expenditures of 1870-72, and that work was finished to public satisfaction. A continuous progressive enhancement in the per capita cost of successive censuses is to be anticipated, even though the scope of enumeration be in no degree widened, by reason of the continually expanding detail † into which

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Ninth Census, 1870,	. . . . .	8.71 "
Tenth Census, 1880,	. . . . .	9.68 "

The increase from 1860 to 1870 represents : (1) the advance in wages and salaries which took place during the war period, and which, in the main, has never been receded from ; (2) the addition of extensive statistical inquiries beyond what had been previously undertaken ; (3) the rendering of the familiar matter of enumeration into vastly greater detail, as will appear in the next note.

† Thus, in 1860, the distribution of the population, according to ages, was into the following classes : under 1, 1-5, 5-10, 10-15, 15-20, 20-30, 30-40, and so on, by decennial periods upwards ; in all, 14 classes. In 1870, under the demand for more minute information regarding the number of persons of school age, of voting age, of military age, etc., the following classification was adopted : under 1, 1, 2, 3, 4, 5-10, 10-15, 15-18, 18, 18-20, 21, 21-5, 25-30,

the traditional classes of statistics will inevitably be drawn, under the ever-growing popular demand for local and minute information. On the other hand, if the scope of enumeration is to be widened, this must be paid for, and paid for handsomely.

The cost of the Ninth Census, 1870, was, in round numbers, \$3,360,000, exclusive of printing and engraving. With the population of that period, the per capita cost was, therefore, 8.71 cents per head. The cost of the Tenth Census, including both enumeration and compilation, but excluding, as in the former case, printing and engraving, was \$4,853,350, which, with the population of 1880, yields a cost per head of 9.68 cents; leaving the total cost of all the new work, then for the first time undertaken, as well as of the vastly increased detail into which the traditional matter of enumeration was rendered, less than one cent per head of the population. Such a comparison must remove from the mind of any candid and intelligent person the opinion that the Tenth Census was marked by extravagance. No person familiar with statistical work could spend an hour in comparing the reports of 1880 and those of 1870, and not be astonished that the vastly greater work could have been done at so slight a relative increase of expense; and, in fact, this was only accomplished by the most painful economy at all points where saving was possible, and by pushing the clerical force forward at a rate of which, it is fair to say, gov-

30-35, and so on, by quinquennial periods upwards to eighty years, and thence upwards by ten-year periods; in all, 25 classes.

Even so, the occasions for distributing population according to ages were not considered to have been fully met; and, in compliance with numerous and pressing requests, including resolutions of conventions and public bodies, the ages of the population of 1880 were ascertained by single years, amounting to over one hundred specifications.

Again, in 1860, the occupations of the people were tabulated in the gross, solely. In 1870, the occupations reported were distributed among six different classes, according to sex and age. At a score of points, a corresponding increase took place in the amount of detail presented. Every such instance adds appreciably, often greatly, to the labor and cost of compilation.

ernment offices in Washington have had little experience.

Perhaps an even more striking vindication of the economy with which the national census of 1880 was conducted is found in the cost of the last State census of Massachusetts, in 1885. The schedules of enumeration here were not, at all points, co-extensive with those of the last national census: some subjects which were treated in the former set of schedules were omitted in the latter, and *vice versa*. Taken all together, however, the scope of enumeration and compilation, in the two cases, may fairly be said to have been equivalent. Yet the cost of the Massachusetts census was 9.47 cents, exclusive of the printing of the final reports. The cost of the preliminary printing, including portfolios, schedules, instructions, etc., is not known to me; but putting the United States census of 1880 on the same basis,—that is, including preliminary printing, but excluding final reports,—we should have the cost, in the latter case, 10.2 cents per capita. When it is considered that Massachusetts is densely populated, with an average approaching two hundred and fifty inhabitants to the square mile, while the national enumeration ran over hundreds of thousands of square miles, having an average of from thirty down to fifteen inhabitants, and over hundreds of thousands more of square miles having an average of from fifteen down to two inhabitants, it can only be matter of wonder that the expense of the national enumeration was not carried up to a much higher point, relatively to the Massachusetts census, than we find it to have been. Yet the Massachusetts census is justly reputed for energy, efficiency, and economy, as well as for the high scientific skill which presided over its details.

So much for the cost of enumeration and compilation in the Census of 1880. Perhaps the expenses of printing, engraving, and publishing have had quite as much effect in producing the impression of extravagance. Viewed in

themselves, those expenses were, indeed, very great; but it is altogether unreasonable and unjust to estimate them without consideration of the established policy of our government in dealing with this matter, and without making comparison with other publications, certainly no more important or generally interesting. To take a single case: the United States paid for printing the last Annual Report of the Commissioner of Agriculture the sum of two hundred thousand dollars. The cost of printing five such reports, dealing with but a single interest and covering but one-half the period between two national censuses, would exceed all the sums paid for paper, for printing, and for engraving at the Tenth Census, including the hundreds of tons of schedules used in the enumeration; portfolios and pamphlets of instructions for thirty-one thousand five hundred enumerators; some hundreds of bulletins, from one to eight pages each, announcing results as fast as ascertained; the two volumes of the Compendium, comprising eighteen hundred octavo pages, printed in a large edition; and, finally, the eighteen large quarto volumes, already published, of the final reports, profusely illustrated with hundreds of maps and thousands upon thousands of diagrams and engraved plans and sketches. Nay, we may add to the above the estimated cost of printing the four remaining quarto volumes of the final reports, and yet fall short of the cost of printing the Annual Reports of the Department of Agriculture from 1880 to the present time. Such a comparison suffices to show that, according to the policy adopted by our government, with the full approval of the people, regarding the publication and distribution of public documents, the expenditures\* of the census on this side were not dispropor-

\* The following appropriations were made for this purpose : —

June 10, 1880, . . . . .	\$125,000.00
March 3, 1881, . . . . .	125,000.00
August 7, 1882, . . . . .	678,624.61
Subsequently appropriated, . . . . .	11,996.36
Asked for by the Secretary of the Interior in his letter to the two Houses of Congress, December 5, 1887, . . . . .	77,495.52

tionate, although the present writer is disposed to admit that a better result would have been attained had the number of the quarto volumes been held down to eighteen, as originally proposed, or even cut down to fifteen; and the smaller number of volumes been published in proportionally larger editions.

It is pertinent to ask why, if the Tenth Census was not unduly expensive, so general an impression to that effect should have been created. The question is very easily and conclusively answered, though not without a somewhat humiliating confession. The impression referred to was caused by the successive deficiency-appropriations for this service, while the necessity for such appropriations arose out of the absurdly low estimate of cost made, in 1879, by the present writer, as Superintendent of the Census. That estimate was made in entire good faith, but with an overweening desire to make the then approaching enumeration at once both the best and the cheapest of the series of national censuses. Now, the latter consideration should not have been entertained at all. The question should simply have been, How can the United States secure the most full and accurate account of its population, industry, wealth, and social condition? Whatever this might cost should have been asked from Congress, without any thought of making a saving beyond what would have been secured by a vigorous and reasonably economical administration. The people of the United States were well able to pay a fair price for the very best census they could get; and it should, in justice, be said that Congress at no time showed any disposition to pinch the service. The superintendent should have said to the Committee of Congress, in 1879: "The Ninth Census cost, for enumeration and compilation, three and a third millions of dollars. The population of the country in the interval has increased, say, about one-third, raising the cost of doing the same work, on the same scale and plan, to four millions and

a third. Add ten per cent. for the proposed enlargements and improvements, including better supervision and more of it, more correspondence, much work of experts and special agents on the difficult points of the enumeration, new statistical features, such, *e.g.*, as the acreage of crops, and even large new classes of statistics, such, *e.g.*, as railroads and telegraphs, and we should have the cost of enumeration and compilation four and three-quarters millions. With due reference to contingencies and emergencies, let us call it five millions." Had the Superintendent said this, Congress would, without a murmur, have voted the sum asked, which would have been in excess of the aggregate amount of the appropriations actually made for the service; all deficiencies would have been avoided, and the census office saved much embarrassment and not a little discredit. As it was, the superintendent actually undertook\* to conduct a very elaborate census of fifty millions of people for less money than had been expended upon a far simpler enumeration of thirty-eight millions. Doubtless, the additional labors, the annoyance, the embarrassments, the distress, which he brought upon himself during the three years following, were only a proper punishment for his ambitious folly; but he ventures to add that the whole sum which he sought to save to the government would have been a very poor compensation personally for what he had thus to undergo.

The delays in the publication of the final reports have also had an effect in impairing the prestige of the Census of 1880. Those delays have, however, been very much exaggerated in popular estimation. The leading reports, those which were specially made up of purely statistical matter, were, with the single exception of that on mortality, published in 1883,—a date which, considering the

\* It is not worth while to give space to a statement of the reasons which influenced my mind towards underestimating the cost of the enumeration. There were such reasons, but they are of little present interest.—F. A. W.

greater scope of the work, compares favorably with the record of any previous census.\* The volumes thus published in 1883 were the two volumes of the Compendium, and, of the final quarto reports, the following: volume 1, Statistics of Population; volume 2, Statistics of Manufactures; volume 3, Statistics of Agriculture; volume 4, Statistics of Transportation. The foregoing volumes comprised nearly everything of a statistical character, with exception of the mortality statistics before referred to, which it had been usual to publish in a census of the United States; while they contained over and above what had ever before been published in this line far more than the sum of all the omissions. The justification of this last assertion will be apparent, at a glance, to any one familiar with statistical work who will examine these volumes. The issues of 1884 were volumes 5 and 6, comprising the results of a great statistical, agricultural, and economic investigation of the Cotton Culture of the United States (the bare figures of acreage and crop having been contained in volume 3); volume 7, Valuation, Taxation, and Public Indebtedness; volume 8, Newspapers and Periodicals, Ship-building, Alaska and the Fur Seal Islands; volume 9, Forest Trees and Forest Wealth; volume 10, Petroleum, Coke, Building Stones, and the Quarrying Industry. In the case of each one of these reports, a summary of the statistics involved had been already published in the Compendium of 1883.

The reports which, though generally complete in manuscript, were not published by the end of 1884,† were, with

\* The single large quarto volume of the Seventh Census bears date 1853. Of the four quarto volumes comprising the final reports of the Eighth Census, two bear date 1864; one, 1865; one, 1866. The three quarto volumes of the Ninth Census bear date 1872.

† These were as follows: published in 1885, volume 11, Mortality Statistics, Part 1; volume 13, Statistics and Technology of the Precious Metals; volume 14, Mining Laws; volume 15, The Production of Coal, Copper, Iron, and the other Useful Metals; volume 16, Water Power employed in Man-

the single exception of those on mortality, all of a technical and semi-statistical character, comprising matter almost wholly new to the census, and intended to form a grand monumental exhibit of the resources, the industries, and the social state of the American people on the occasion of their tenth ten-year enumeration. Had these promptly followed the more distinctly statistical reports, they would have been greeted with universal applause. As it was, the successive volumes have received most enthusiastic commendation from the press and the statisticians of Europe,—all the way from London and Edinburgh to Vienna, Buda-Pesth, and St. Petersburg. But the American mind is highly impatient of delays; and the procrastination of several of these reports has, it is to be feared, rather impaired than increased the popular estimation of the Census of 1880, altogether irrespective of their intrinsic worth.

The delays alluded to were due in part to the financial embarrassments of the Census Office; in part, also, to the enormous pressure of current business upon the government printing-office, which allowed the census reports, during much of the time, to be taken up only as “knitting work,” when matters of greater urgency would permit; but, chiefly, to the increasing and finally complete disability and ultimate death of Colonel Charles W. Seaton, who in November, 1881, succeeded the Superintendent who had organized and thus far conducted the census. As an analyst and critic of statistical matter,

ufacturing, Part 1. Published in 1886, volume 12, Mortality Statistics, Part 2; volume 18, Social Statistics of Cities, Part 1; volume 20, Wages, Trades Unions, and Strikes. The four volumes remaining unpublished in 1887, for which an appropriation has been asked (as hereinbefore recited), are as follows: volume 17, Water Power, Part 2; volume 19, Social Statistics of Cities, Part 2; volume 21, Statistics of the Defective, Dependent, and Delinquent Classes; volume 22, Reports on Machinery used in Manufactures. The Secretary of the Interior stated, in his letter to the Houses of Congress, that ninety-nine hundredths of these reports are already stereotyped, and only await an appropriation for printing and binding. The outright failures of the census of 1880 were in respect to churches and private schools.

Colonel Seaton had no superior; but his pondering and reflective turn of mind probably interfered somewhat from the first with the progress of a work which peculiarly requires peremptory and energetic treatment, while, within two years from his accession to office, the enormous pressure of care and work incident to the service, aggravated by unkind criticisms and malevolent attacks from many quarters, developed the seeds of disease which had been planted during the war, and he began palpably to lose ground. Still, he struggled on, impatiently rejecting every suggestion for his relief, passionately exclaiming that he only desired to finish the work and die. But even this was not permitted. Softening of the brain ensued; and, after a painful period, this faithful, high-minded, and able public servant passed away, leaving his work still incomplete. Such a misfortune might befall any office, and it is to be hoped that those who have made the delays in the publication of the census reports thus occasioned the subject of small jokes will some day be properly ashamed of themselves.

So much space has been given to facts relating to the Tenth Census, both because it seems but right that a record should be made of them in our economic literature, and because they are fairly precedent to a discussion of what is best to be done for the future. Even if the scope of the census law is to remain undiminished, probably no one — certainly not the present writer — would recommend that a similar latitude be given to the publication of any census soon succeeding. In its nature, much of the work done from 1880 to 1883 is definitive, or else such as to require only slight additions or corrections from time to time. The magnificent report of Professor Charles S. Sargent on the Forest Trees and Forest Wealth of the United States — a work without a superior, if, indeed, it finds anywhere its peer, among the government publications of any country — is of the former character. The

two volumes on Water Power employed in Manufactures, and the two volumes on the Cotton Culture, are of the latter character. Much of the work in them has been done once for all; while, though the industrial and economic statements will require to be changed from census to census, a suitable and ample background will have been furnished for them in the geographical and hydrographic studies of Professors Swain and Porter and their colleagues, or in the geographical, agronomic, and chemical investigations of Professor Eugene Hilgard and his corps of assistants, embracing the highest skilled and scientific talent of the Southern States. In a greater or less degree, the same is true of many others of these reports, notably those on Tobacco Culture, on the Grazing Interests of the Frontier States, on Building Stones, on Petroleum, and on the Social Statistics of Cities, etc. The Tenth Census was more than an enumeration of population, wealth, and industry. It was a survey of the conditions of life, industry, and production, such as cannot fail to be of great value to a rapidly growing nation, such as was peculiarly appropriate to the tenth decennial census under the Constitution,—a survey which, though lacking something of completeness, by reason of insuperable obstacles in some cases, and by reason in other cases of the loss of some of its chief officers,\* is yet a work worthy of the nation and of the age. The well-known names of the hundreds of men of science, economists, and statisticians who contributed to the giant undertaking afford a sufficient guarantee of the thoroughness, the conscientiousness, and the ample scientific knowledge with which their several tasks were performed; while a wealth of

\* Especially the resignation of Mr. Clarence King, as Director of the Geological Survey, prior to the conclusion of the investigations into the Mining Industries, and the lamented death of Dr. George W. Hawes, who had projected and partially carried out an investigation into the Building Stones of the United States, which, had it been completed according to his plan, would have remained a lasting monument to him and to the Tenth Census.

graphic illustration brings the results within the comprehension of the least skilled and the least learned.

But while, for the reasons above stated, it is not to be expected that immediately succeeding censuses will be of such colossal magnitude, it is yet, in the judgment of the present writer, not desirable that the presentation of results should ever again revert to the traditional form of bare statistical tables, accompanied only by brief notes and explanatory remarks. In order that they may be of the widest popular and highest scientific value, the results of every enumeration should be fully and freely discussed and profusely illustrated; the various classes of facts should be carefully correlated; and all should be shown on the background of the geographical, geological, and meteorological conditions within which they exist, and in their historical connections. Our previous experience has distinctly and unmistakably shown that, if this is not done by the Census Office, it will not be done at all. The statistical skill and experience which are requisite for the work are possessed by very few, while the clerical labor involved is far beyond the means of individuals. In this view, a future census of the United States should be a mean between the Census of 1870 and that of 1880. Eight or ten volumes, less than the yearly issues of an ordinary daily newspaper, are not too much to properly set forth and array the facts concerning a nation of sixty or eighty millions, of such vast and varied industrial and social interests and concerns, once in ten years.

We have heretofore made the proviso, "If the scope of the census law is to remain undiminished": is it desirable that such should be the case? This is the most important question touching the future census of the United States. There has never been any reason but one why the vast amount of statistical work, which was charged upon the census by the Act of 1850, should be conducted by that agency. That single reason was found in the

social rawness of our people, leaving them unappreciative, to a great degree, of the importance of statistics, and in the political scruples entertained by many regarding the authority of the United States government to obtain information for information's sake. Doubtless, it is true that, when the Act of 1850 was passed, it would have been impossible to secure legislation for obtaining the statistics of agriculture and of manufactures and the various classes of social and vital statistics embraced in the schedules of that law, except under cover of the express constitutional provision for a decennial enumeration. It has been for this reason, and not because the Census has been considered the most appropriate agency for the collection of many of these classes of statistics, that one after another, and one score after another, of inquiries have been piled upon this overweighted public servant.

So long as the indicated reason existed, the action taken by the promoters of the successive census laws was wise and patriotic; for it was indefinitely better that the information sought should be obtained in this way than not at all. But have we not become civilized enough by this time, are we not sufficiently a nation now, to be able to get the statistics we require — the statistics so eagerly sought for by men of all classes, sections, conditions, and avocations in life — in simply the best way in which we can get them, without resort to a political subterfuge, and without using inappropriate and largely ineffective agencies? Upon the answer to this question turns the future of the census. Personally, a strict constructionist, I do not believe the Constitution has been outgrown; but I do believe that the American people have outgrown the little, paltry, bigoted construction of the Constitution which, in 1850, questioned in Congress the right of the people of the United States to learn whatever they might please to know regarding their own numbers, condition, and resources. It has become simply absurd to hold any longer

that a government which has a right to tax any and all the products of agriculture and manufactures, to supervise the making and selling of butterine, to regulate the agencies of transportation, to grant public moneys to schools and colleges, to conduct agricultural experiments and distribute seeds and plant-cuttings all over the United States, to institute scientific surveys by land and deep soundings at sea, has not full authority to pursue any branch of statistical information which may conduce to wise legislation, intelligent administration, or equitable taxation, or in any other way promote the general welfare.

There are two objections to loading down the census with a large and miscellaneous body of statistical inquiries. The first is that the primary object of the enumeration, the count of the people, is, in some degree, perhaps not greatly, sacrificed thereby. The attention of the community, as well as of the officials engaged, is diverted at times and in places from the all-important end of securing a just and accurate return of every man, woman, and child upon the population or family schedule, with all the required particulars of age, sex, nativity, occupation, etc. In the case of the community at large, this diversion of attention is not of very serious consequence, although an active popular interest in the enumeration is a great help to the Census Office and its agents. In the case of the actual enumerators, however, the multiplication of duties, if carried very far, becomes a real source of injury. A census agent who is carrying about a portfolio full of blanks, and has been charged with a whole pamphlet of instructions, relating to all sorts of subjects, cannot be expected to be as active, alert, and attentive in collecting the statistics of inhabitants as if he were charged with this duty only. With the thoughts concentrated upon the narrower field, with the mind constantly revolving the liabilities to loss and error within that field, it goes almost without saying that the work

would, in some measure, be better done. It is not intended, however, to lay much stress on this consideration. Certainly, the disadvantage arising from this source is vastly more than compensated by the value of the additional statistics obtained under existing laws, if, indeed, the latter can only be secured by this method.

A more weighty objection to the present system is found in the inability of the Census Office, no matter how completely organized and ably administered, to deal, at once adequately and seasonably, with the vast, heterogeneous mass of returns which are thus poured in upon it. Either the work of examination and revision must be hurried and perfunctory, or else compilation and publication must be protracted over a very long period. Probably no one who has not actually visited a Census Office in the height of its work can form a conception of the extent and variety of the materials which have there to be dealt with; while only one who has worked for years over such materials can realize the importance of giving to each successive portion a close and minute scrutiny. The schedules of population, merely, returned to the Census Office in 1890, will, when bound, exceed in bulk fifteen hundred merchants' ledgers of the largest size. The schedules of agriculture will fill three or four hundred volumes more. If we add the returns relating to manufactures, to wealth, debt, and taxation, to schools, libraries, and churches, and to deaths, it will be seen that the bare transcript of the facts with which the Census Office has to deal constitutes an immense library. Every part of this mass ought to be carefully searched by the eye of a master for duplications or omissions, for errors of conception or errors of transcription or for the results of downright fraud. Beyond this, to prescribe the forms of tabulation and compilation appropriate to each class of statistics, to superintend the progress of the work in every part, to answer the thousands of questions coming up

from the army of clerks engaged, and at the same time to direct the financial and other necessary business of such an office, is a task of monstrous labor and anxiety. Something, much, must necessarily be sacrificed of completeness and of accuracy, in order that so large a whole may be carried through within reasonable limits of time.

What is eminently to be desired in the interests of our statistical service is that the census should be confined to an enumeration of population, coupled only with one other class of statistics, to be hereafter mentioned, such an enumeration to be conducted once in ten years, as now, or, better, once in five years, as befits so great and rapidly growing a people ; \* while the remaining statistical inquiries now connected with the census, and even many others required to meet the increasing demand for exact knowledge, should be set on foot and conducted in proper succession, by the same bureau of the government, during the intervals of the decennial or quinquennial censuses. Such a system would dispense with the necessity for suddenly raising and suddenly disbanding a large office ; would retain permanently in service a considerable force of trained clerks, enabling them to acquire skill, insight, and rapidity of working by continuous experience ; and would thus at once diminish the cost and increase the value of the results obtained. Meanwhile, the work of inspection and revision by the head of the office and his most expert assistants would become vastly more effective, owing to the limited number of subjects presented at a time, and also owing to the diminished interruptions from the administrative side of the office and from persons seeking employment. The office, as a whole, taking up one or two or three classes of statistics at a time, could master the conditions of each, devise the most effectual methods of compilation and tabulation, and concentrate attention and effort to the highest effect.

\* A nation which gains twelve or fifteen millions in ten years can afford to take a census once in five years, or, rather, it cannot afford not to do so.

The class of statistics which, so far as we can see, must needs be collected at the same time with the statistics of population is that relating to agriculture. Unless Congress decides that considerations of expense should have no weight in this matter, it would be inexcusable to require the entire surface of the United States to be gone over a second time, on foot or on horseback, for the purpose of collecting the productions of five millions of farms. The cost of obtaining the statistics of population and of agriculture conjointly would probably be not one-third greater than the cost of collecting the former class of statistics separately; while the impairment of the results, through the division of the enumerator's attention, would not be serious, if only these two schedules were placed in his hands. The value of a farm-to-farm enumeration of agricultural products, live stock, etc., can scarcely be overestimated. Our people are in a high degree intelligent and communicative. They recognize with remarkable readiness the interest and the right of the government to collect statistics, and they are almost wholly free from apprehensions regarding the use to be made of the information by them given.\* Conditions like these distinguish our people widely from the population of any other considerable country in the world, in respect to their fitness for such an enumeration. What an American doesn't know about his own farm, or, for that matter, his neighbor's, too, is not worth knowing; and all he knows he is perfectly willing to tell. It follows from this that the statistics of agriculture, in the American census since 1850, have been of a very high order. Where a crop is cultivated only now and then, and that on a small scale, it is not unlikely to be overlooked in a certain proportion of cases; but, in regard to the main crops of each district,

\* I cannot remember ever to have observed any effects, in the statistics of agriculture, of a fear that the facts disclosed might be used for taxation. Possibly, the statements regarding the value of farms may, in some degree, have been affected by such a consideration.

the statements are, in general, very near the truth. The effect of the tabulation and compilation of several millions of farms in a census of the United States is to give a remarkably just account of our agriculture, as a whole, and of the resources and productions of each section, State, and county by turns. The statistics of agriculture obtained every tenth year by the census are used as a basis for the computations of the Department of Agriculture, with reference to the intermediate years. These computations, made by trained statisticians after correspondence with some thousands of local reporters, are usually very satisfactory during the earlier years of the decade. As the reference to the census becomes more laborious and less confident through the lapse of time, the estimates of the Agricultural Department become liable to a wider range of error. Could a canvass of the agricultural interest be made in connection with the enumeration of population, once in five years, the people of the United States would be better informed regarding that interest than the people of any other country in the world.

The chief statistical branch which, under such a change of scheme as is suggested, would be detached from the census is that which relates to manufactures. Theoretically, the manufacturing schedule has always embraced the products of artisans working singly at their trades, and of the small carpenter's, blacksmith's, and wheelwright's shop, whether found at the cross-roads or in a shed attached to house or barn. As a matter of fact, the canvass of manufactures has at no time reached more than a small proportion of the productions of this class; and the tables of manufactures would be more symmetrical and less likely to create a false impression if these small "neighborhood industries" were in no case included as having been obtained by direct returns, but, on the contrary, were all to be estimated as a whole on the basis of the reported "occupations of the people," upon the

population schedule, after careful inquiry as to the rates of wages prevailing in these hand-trades in the several sections.

Thus to withdraw from the shop-to-shop canvass of manufactures the small neighborhood industries, would be to take away all the reason which ever has existed for connecting with the census this class of statistics. The facts relating to the productions of the large city, of the considerable town, or of the village clustered around the single mill or factory, could in all respects be as well, and in some respects be better, obtained aside from the general enumeration of the people; while the central office at Washington could both prepare more intelligently for the canvass, and more deliberately and critically discuss and compile the returns, if this work were to be undertaken after the tremendous pressure of the quinquennial or decennial census were altogether or mainly passed. Whether the effort should be made to obtain the statistics of all branches of manufactures as of the same date, or each great branch should be taken up by itself and treated as it best could under its own conditions and with reference to its own times and seasons, is a question requiring careful consideration,—a question to which, perhaps, answer could best be given through the results of trial. Whichever way that question were decided, the present writer entertains no doubt that the knowledge to be gained regarding these great and growing interests, through investigations set on foot, during the intervals of the general census, by a statistician of the intelligence, energy, and prudence of the present head of the national Bureau of the Statistics of Labor,\* would be far larger and far more accurate than all which it can be hoped to attain through a hurried enumeration, conducted in connection with the count of population.

The only reason that could be adduced for taking the statistics of manufactures coincidently with those of popu-

\* Hon. Carroll D. Wright.

lation would be found in the supposed advantage of comparing the statistics of product directly with the numbers of the people, whether in the country, as a whole, or within each section, State, or city; but the loss of the advantages of such comparison would be more than compensated by a slight degree of improvement in the manufacturing statistics themselves. Moreover, it would generally be practicable, within five years after an exact enumeration, to compute the population of the country, at any given time, to within one per cent.; always practicable to make that computation to within two per cent. Now, if comparison were, for any purpose, to be made between population and manufacturing product, a difference of one or two per cent. in the former element would be of no consequence. No one would presume to reach any theoretical conclusion, or to propose any practical measures, regarding industry or trade or taxation or the tariff, upon a distinction so fine. Indeed, a statistician would scarcely maintain that the statistics of manufactures themselves could, as a whole, be made accurate within five per cent., although in single departments of industry, where production is highly concentrated, a greater degree of exactness may be attained.

Of the numerous subjects to which the central statistical office might apply itself in the intervals of the national census — namely, wealth, taxation, and local public indebtedness; telegraphs, railroads, and internal commerce; the lumbering, quarrying, and mining interests; the fisheries, newspapers, and periodicals; schools, libraries, and churches; hospitals, asylums, workhouses, reformatories, and other institutions for the afflicted, defective, dependent, and delinquent classes,— of these and other subjects, both old and new, of statistical investigation, it is not necessary to speak here at any length. If the Census Office, emerging from the storm of schedules falling upon it by the million, relating to population and agriculture, were given both authority and means to undertake

investigations like these, there would be little difficulty in determining their order of succession or the relative importance to be assigned to each ; and though to digest the schedules of interrogatories relating to any one of these subjects, and to prepare the scheme for its canvass, would be a work requiring much discretion and great labor, the results, in competent hands, would be certain to exceed in value those which it is possible to obtain under the existing system. Nor need the expense of a service thus protracted through the intervals of the national census be greater than the cost of the less ample and adequate statistics now obtained. There is great loss, both of economy and of efficiency, in suddenly gathering together an army of statistical clerks, and as suddenly disbanding them when they have acquired a large measure of skill and technical knowledge.

There is one class of statistics now taken in the census to which in these later pages no reference has been made ; namely, those relating to deaths and the causes of death. By the census law of 1850, a mortality schedule was placed in the hands of the assistant marshals ; and it was sought to recover the facts of death for the twelve months preceding the enumeration. That effort has been continued through each successive enumeration to the present time ; but the results have never been satisfactory, and the changes palpably taking place in our domestic life are continually rendering it more and more difficult to compass the object sought. It requires a very considerable effort to bring the number of deaths reported up to seventy per cent. of those actually occurring during the year. Nor do the omissions take place with such uniformity as to allow the results to represent, even approximately, the relative mortality of the different sections. In some stages of settlement and under some conditions of domestic life,—*e.g.*, in the older agricultural communities,—comparatively few deaths escape notice. In other communities, especially along the frontier or among mining,

lumbering, and grazing populations, the rate of omission far exceeds the average. Under these circumstances, the only value which the mortality returns of the census have ever possessed was through affording some rude means for computing the viability of the two sexes and their respective liability to certain forms of disease; of doing the same thing, but even more incompletely, regarding the several main elements of population, as white or colored, native or foreign; of outlining, though very imperfectly, the disease-characteristics of the several sections of the country; and, lastly, of affording to the medical profession some technical information, very doubtful in its nature, if taken without discrimination, yet capable of yielding, under a severely critical treatment, matter not without interest and instruction. The mortality returns of the census have never been sufficiently complete to allow an approximate life-table of the United States to be constructed, or to permit comparisons as to their respective death-rates between States and sections. The present writer would hesitate to say that it is not worth while to continue to collect mortality statistics in the census, provided nothing is to be substituted therefor. Ten years ago, he would not have scrupled to say this; but the masterly treatment of the returns of deaths at the Tenth Census, by Dr. John S. Billings, of the regular army, with the public-spirited co-operation of nearly thirty thousand physicians throughout the country, has established the possibility of securing results of high value from data so fragmentary, incomplete, and often inaccurate as those which this canvass brings into the Census Office. Yet there seems little reason to doubt that by more appropriate agencies, created for this special purpose, statistics much more worthy of the country, much more useful to the medical profession and to the life insurance interest, could be obtained, although nothing short of universal, compulsory registration of all deaths, under severe penalties for non-compliance, will put the United States on

the level of any other highly civilized nation in respect to information regarding the conditions of human life. After all is said, I think it must be conceded that the one class of statistics, among the many put upon the census since its first institution, which least fully justifies itself, is that now under consideration.

Administratively speaking, the changes above proposed in the statistical service of the United States would be exceedingly simple. The Census Office has expired by limitation of law. Instead of reviving it in 1888 or 1889, let the taking of the eleventh census be charged upon the existing Bureau of the Statistics of Labor, in the Department of the Interior,—the department which, since and including 1850, has had supervision of this work. If possible, let the census period be reduced to five years;\* but this is not of the essence of the proposed change. Let the law designate the inquiries which shall be made as of date June 1, 1890. These will of course embrace those found traditionally on the population schedule,—namely, age, sex, color, place of birth, occupation, parent-nativity, illiteracy, etc.; probably, also, those relating to agriculture; possibly, also, some other minor subjects, if good reason shall be shown to exist therefor. Let the character and scope of the statistical investigations to be set on foot† in the intervals between the successive enumerations of the

\* The provision of the census law of March 3, 1879, intended to encourage and assist the several States to take censuses for themselves, at a date intermediate between the United States enumerations, proved a failure.

† As the one upon whose recommendation, largely, the provision for the appointment of special agents and experts was incorporated in the census law of 1879, and as the one who had the initiative in regard to the appointments actually made under that authority at the Tenth Census, I desire frankly to say that, while many noble results were obtained in this way between 1880 and 1883, which otherwise could not have been obtained at all, or only with greatly diminished value, this feature of the existing law should undergo careful revision in a highly conservative spirit. The Census Office should still, in my judgment, be authorized to employ special agents; but the number of such officers and the term of their appointment should be limited. I think that this agency would be equally well used, with less liability to abuse, within more definite restrictions.— F. A. W.

people be duly indicated ; but let the dates at which these shall be severally undertaken be left, at least within considerable limits of time, to the officers charged with the service. Let the aggregate amount which shall be expended upon all the work of the census during the decennial or quinquennial period be, after full consideration and free conference, fixed in the law ; but let the application of this amount to the several branches of the service be left to the department or bureau concerned. By this arrangement, the Census Office will have means enough, beyond all question or apprehension, for carrying out the main canvass,—that relating to population and agriculture,—and at the same time will be under strong incentives to enforce all reasonable economies, since, the more is saved from that canvass, the more will be left for carrying out the statistical work of the remaining years. In this way, with a liberal appropriation in the first instance, all danger of deficiencies will be avoided. The Census Office, setting on foot the several inquiries one after another, can cut its coat according to its cloth : whereas, if all the multitudinous investigations are to be begun at once, it will be beyond any man's wisdom to provide that they shall all come out complete within a predetermined amount, unless, indeed, that amount be fixed very high.

Nor do I see that any political perplexity or difficulty would be encountered in the proposed change. To charge the work of the census upon an existing bureau of the Department of the Interior, instead of creating a new bureau or reviving an old one, certainly raises no constitutional or political question. To assign different dates to the several minor matters of enumeration is fully within the competence of Congress, if that body has the authority to direct the collection of any statistics other than those of population ; and, in this connection, it is well enough to call attention to the fact that the attempt to obtain the facts relating to manufactures goes back to 1810, when Jefferson, Madison, and Gallatin were the

great lights of the dominant party, was repeated in 1820, under Monroe, and again in 1840, under Van Buren.

That the present important work of the Bureau of Statistics of Labor would not suffer injury by the imposition of even so large a body of new duties will, I think, appear when one considers how closely and intimately the two services are related; how directly the experience acquired in either would prepare its officers for taking up the other; how immediately the material gathered in one branch of investigation — *e.g.*, the facts, the names, the addresses — would be found useful in facilitating the arrangements for and the conduct of the other. This is not a case where to widen is to weaken, where to increase the scope of a service is to diminish its efficiency. Given only adequate means and high executive ability, both classes of work, each for itself, should be better done by reason of the conjunction.

Of course, if political or practical reasons are found to forbid the changes in organization or method herein recommended, nothing remains to be done but to modify the Act of 1879, so far as experience may have shown this to be necessary, and to apply it, with a view to the best results, in the approaching enumeration. That law effected a vast, an unspeakable improvement upon preceding census legislation. For the first time, it gave the central office at Washington adequate authority over the arrangements for taking the census, and over the enumeration while in progress. For the first time, it provided the proper local control and inspection of the delicate and difficult work of enumeration, through the appointment of one hundred and fifty district supervisors, chosen with reference to this duty, charged with this alone, and directly responsible to the central office, in place of the marshals of the United States courts,—officers who had been previously chosen with reference to altogether different duties, who were already overburdened with cares and responsibilities of the most urgent character and of a

widely diverse nature, and who, strangely enough, belonged to a different department of the government from that to which the census was, by the Act of 1850, committed. In place of the large and unwieldy enumeration districts, previously existing, with the greater portion of which the enumerators were, by the necessity of the case, unfamiliar, the Act of 1879 limited the districts to a size which practically secured the result that each enumerator should be acquainted, in advance, with the ground he was to traverse,—its highways and byways, its most secluded valleys and its remotest clearings; should be known to the inhabitants and known by them, an element of the greatest importance in securing official responsibility.

The long forward step taken in the Act of 1879 can never be retraced, nor does the present writer believe that the loose talk heard in many quarters about carrying the census back to its original Constitutional function, expresses the real purpose of any considerable number of intelligent citizens. What the country wants is more information, not less.

There never was a time when the demand for statistics was everywhere so great as at present. Even the troublesome and pestilent criticisms and attacks, which every feature of our official reports now undergoes, represent chiefly the widening and deepening of the public interest in the results of the enumeration, although the zeal so displayed is not always according to knowledge, nor is the spirit manifested always that of charity or candor. If the number of persons competent to criticise intelligently at least some one considerable portion of the census be ten times as great as it was, say, twenty-five years ago,—and I have no doubt that this is the case,—the number of those who, while not experts in statistics, are yet capable of making intelligent use of some integral part of what the census may declare, is at least twenty times as great. Moreover, at the present time, instead of the great majority of citizens, even among the reading and

thinking classes, neither knowing nor caring to know what the census has to tell, we find nearly the whole body of our people actively and eagerly interested in the results of a national enumeration. It is safe to say that at the census of 1880 there were a hundred demands for early information to one in 1870.

Nor are we confined to this fact alone for proof of the assertion above made. The issues of the newspaper press of to-day fairly bristle with figures. The able and astute managers of these great public organs are not acting vainly or lightly in this matter. They well know the interest which their vast constituencies feel in the statistics which reveal the social and industrial progress of the nation. Whether editors or Congressmen make the freer use of statistics may well be a matter of doubt.

Whether one compares the American newspaper of to-day with that of a former period in this respect, or compares the *Record* of the Fiftieth Congress with the *Globe* of the Fortieth as to the number and extent of statistical tables now and then ; or compares the public lectures and addresses of our time with those of the *ante-bellum* age ; or notes the large space devoted to political and social science in our universities and colleges and even in our high schools, in contrast with the utter blank in this department of their old catalogues ; or studies the proceedings of commercial conventions or manufacturing associations,— he finds everywhere the proofs of a rapidly rising, fast advancing interest in statistical matters. To suppose that at such a time the United States — which has, almost from its beginnings, occupied the first place among the nations of the earth as to the extent and variety of its statistics, except only those relating to births and deaths — is to fall back from its high place and surrender ground to the advocates, if such there be, of political ignorance, is to assume that a large effect will be produced without a cause.

FRANCIS A. WALKER.

## THE WORKINGS OF THE INTERSTATE COMMERCE LAW.

THE career of the Interstate Commerce Commission has been equally remarkable whether looked at as a matter of history, of law, or of political economy. Its work has been a surprise both to its advocates and its opponents. Instead of being an administrative body whose chief duty it was to suspend the operation of certain sections of a particular statute, it has given a series of judicial decisions which are read and quoted as authority,—not on the meaning of the Interstate Commerce Act only, but on general questions of transportation. Never, perhaps, has an important body of new law been so rapidly created and so generally obeyed. The authority of the Interstate Commerce Commission was as indefinite as that of the English Commission established in 1873, and its departure from accepted legal traditions has been much wider. Yet the American Commission has done more work in making and settling questions of law in seven months than was accomplished by the English Commission in twice that number of years. A really sound principle, uttered by a public authority which commands respect, becomes law with surprising ease. A false principle, however often repeated, is evaded and nullified.

The Interstate Commerce Act, as finally passed, contained four sets of provisions: 1. A reaffirmation of the common-law doctrine of equality of treatment, with certain special provisions as to publicity and stability of rates, which should aid in securing such equality; 2. The prohibition of a greater aggregate charge to or from an intermediate point than for the whole through route,—the so-called Short Haul Clause; 3. The prohibition of

pools; 4. The establishment of a Commission to aid in enforcing the law, but with power to suspend the execution of the Short Haul Clause in certain cases.

The general provisions against discrimination were accepted almost without debate. They simply affirmed some of the most elementary principles of justice, whose violation by short-sighted officials had given force to the public demand for railroad regulation. The railroad companies themselves did not oppose these sections. The better class of railroad managers and agents really desired to see these most serious abuses stopped; the worst class rejoiced in the belief that this section of the law would be practically inoperative; while the average railroad man, who was neither better nor worse than his fellows, was quite content to concede this measure of restriction and this amount of authority to the United States courts, lest a worse thing should befall him. These sections, therefore, met with little opposition. Some complaint was made with regard to the enforced publicity and stability of rates, but it was not a ground of serious opposition to the bill.

The short-haul clause attracted far more attention. This was no mere general restatement of common-law principles, but involved a specific prohibition of a certain form of local discrimination. It had been Mr. Reagan's intention to make this exceedingly stringent, and force the railroads to a system of charges which should not vary very greatly from equal mileage rates. The Senate bill, on the other hand, was so much milder in its requirements that comparatively few of the railroad tariffs would have been seriously affected by it. No real compromise was possible between such divergent opinions. It was, however, possible so to modify the phraseology of the Senate bill as to give color to a more stringent interpretation than that which was really intended. This was what was actually done. Fearing that they could not

command a majority for any really definite provision on this head, the conference committee approved an indefinite one, which Mr. Cullom interpreted in one way, but which Mr. Reagan, with equal confidence, explained as meaning something entirely different.

The clause against pools was, in some sense, foreign to the general tenor of the bill. Pools had been a means employed by the railroads for checking to a considerable extent those discriminations which the bill was designed to prevent. It is probable that those advocates of the House bill who thought about the matter at all, and did not vote from a general sentiment of distrust of the railroads, feared that, if pools were permitted, the railroads would comply with the requirements of the law by leveling up their through rates rather than by levelling down at intermediate points. They desired and expected that the law should produce a reduction in rates, and feared that pools might be used to defeat that end. When forced to yield their point with regard to the Commission, the advocates of radical measures were able to insist all the more strongly on the clause against pooling.

The provisions with regard to the Commission originated with the Senate committee. Mr. Reagan and the majority of his colleagues in the House were opposed to them. It was thought that such a Commission, with discretionary power to suspend the operation of certain sections of the Act, might readily make it a dead letter. At any rate, it would deprive the law, in the eyes of the railroads, of some of its most obnoxious features. This was why Mr. Reagan opposed it and why Mr. Cullom advocated it. The subsequent history of the Commission has been quite different from the expectation of either party.

Every one supposed that the duties of the Commission would be largely of a negative character. They had the power to suspend one section of the Act which was regarded as specially dangerous. In the debates on the Act,

this power had been treated as the really essential thing about the Commission. It was on account of the possession of this power that it was advocated by some men and opposed by others; while those who were neither active in support nor in opposition were inclined to regard the Commission as a sort of buffer, which was to prevent the collision between the law and the railroads from becoming too violent. On the whole, its creation was regarded as rather a favor to the railroads. The first important acts of the Commission tended to confirm this impression. The applications of the Southern and other railroad systems for a suspension of the Act were granted,—for a limited time only, but, nevertheless, in so indiscriminate a fashion as to give color to the idea that the law would become a dead letter.

Impartial observers were generally disappointed. Even those who disbelieved in the wisdom of the short-haul clause, and who had the utmost confidence in Judge Cooley and his associates, did not hesitate to express their dissent from the policy thus adopted. But they did the Commission injustice. The Commissioners did not for a moment think of making these temporary suspensions permanent. They gave them their general and sweeping character, in order that no one might regard them as a precedent for final action. From the Report of the Commission, it appears that they were, at the outset, substantially agreed upon the line of policy which they finally adopted, but that they deemed it wise to make these temporary suspensions: first, because they did not like to utter a final opinion without fuller opportunity to hear the evidence on both sides; and, second, in order that the railroads and the shippers of the country might have more time to adjust themselves to the new law without violent disturbance.

If any persons thought that the Commissioners intended to make the law a dead letter, they were soon undeceived,

—long before the definite opinion was rendered. In a hearing at New Orleans, one of the witnesses presented an elaborate argument to the Commission, showing the unwisdom of the law. To this Judge Cooley, speaking for the Commissioners, declined to listen. The witness urged that his idea was to show that the enforcement of the law was unwise, and that it should be suspended under the discretionary power of the Commission. The reply of Judge Cooley was as follows:—

We have no such discretionary power whatever, to suspend this law or any other law. This law provides that in exceptional cases we may make an order, but the question is whether an exceptional case is shown. The petitioners before us think that by their petitions they have shown such a case, and we are ready to hear your evidence, or the evidence of any other person tending to show the exception; but you produce nothing so far, in argument or otherwise, that tends to show an exception. On the other hand, all that you show tends to support the proposition that the law is in itself unwise. We have no business to assume that, and we do not expect to assume it under any circumstances. . . . It is a part of the law itself, however, that under certain circumstances we may make exceptions; but, in order to entitle us to make the exceptions, there must be some showing, first by petition and then by evidence, that the exceptional case does exist.

When the Commissioners finally rendered an opinion (June 15, 1887, *In re Louisville and Nashville*, 1 Interstate Commerce Reports, 31), they still further narrowed the range of probable exceptions. They call attention to the fact that in the bill as originally drafted by the Senate committee there was a somewhat stringent provision with regard to rates, combined with more general powers for the Commission to grant relieving orders; but that, in the bill as modified and finally adopted, not merely were the powers of the Commission narrowed, but the law itself was also considerably changed by the introduction of the phrase “under substantially similar circumstances and conditions.” “After mature consideration,” says Judge

Cooley, "we are satisfied that the statute does not require that the Commission shall prescribe in every instance the exceptional case, and grant its order for relief before the carrier is at liberty in its tariffs to depart from the general rule." In developing this idea, the Commissioners clearly foreshadowed the lines of their subsequent policy. The effect of this decision was not to suspend the short-haul section of the Act, but to give such an interpretation to that section as should render its suspension necessary. They try to give the mildest possible construction, but the fewest possible exceptions.

The section in question reads as follows: —

*Sec. 4.* That it shall be unlawful for any common carrier subject to the provisions of this act to charge or receive any greater compensation in the aggregate for the transportation of passengers, or of like kind of property, under substantially similar circumstances and conditions, for a shorter than for a longer distance over the same line, in the same direction, the shorter being included within the longer distance; but this shall not be construed as authorizing any common carrier within the terms of this act to charge and receive as great compensation for a shorter as for a longer distance. *Provided,* however, That upon application to the Commission appointed under the provisions of this act, such common carrier may, in special cases, after investigation by the Commission, be authorized to charge less for longer than for shorter distances for the transportation of passengers or property; and the Commission may from time to time prescribe the extent to which such designated common carrier may be relieved from the operation of this section of the act.

The Commission interprets this section as follows: —

1. When the circumstances and conditions are not substantially similar, the Act does not apply. The railroads can disregard it without special authority from the Commission. 2. Where the conditions are similar, the Commission will not ordinarily suspend the operation of the Act. They will not do it even when it seems to be for the interest of all parties concerned, unless the case is exceptional, and one of peculiar hardship. In the case of

*Vermont State Grange v. Boston and Lowell* (1 Interstate Commerce Reports, 158), the low rates for through business were the only means by which that company could secure any share of the traffic. The Commissioners admitted that it was the right and even the duty of the Central Vermont to obtain and keep up a through business, if they could do so without violation of law. They admitted that no injustice was done to the local traffic. They were entirely satisfied that a large through business is essential to this line, if it is to continue to be a useful line even for local business. They are also satisfied that the people of Vermont are largely interested in the low rates on the long-haul traffic, and that the company cannot afford to reduce the rates on the local traffic. Nevertheless, they regard the low through rates as a violation of the law, and do not consider the case as sufficiently exceptional to justify them in suspending the operation of the Act. They refuse to make such suspension where it is in some sense both just and necessary, because the case is not exceptional. Congress has passed a law which will affect many interests adversely; but, having passed it, Congress presumably intends that it shall not be generally suspended, but generally obeyed.

But what constitutes a dissimilarity of circumstances and conditions, which will justify the roads in charging less for the whole route than for a part of it? Although the Commissioners said that the railroads must decide this for themselves, they also indicated what sort of a decision was likely to meet with the approval of the Commission. The railroads might make exceptions in the case of competition with other routes not subject to the provisions of the Act. In other words, they might protect themselves against water routes or against Canadian railroads. But they could not make any exceptions because of the superior advantage of through traffic as such, even though it should be shown to be less expensive to the carrier; nor

for the purpose of encouraging particular industries or localities; nor because the long-haul traffic will be destroyed by raising rates to the level of the intermediate points.

The effect of this interpretation was greatly to reduce the importance of the long and short haul clause. Had Mr. Reagan's view been adopted, and the railroads forced to adopt equal mileage rates, it would have been disastrous to the business of the country. Mr. Cullom's milder interpretation, which simply forbade a greater *aggregate* charge for the intermediate point, brought the law into harmony with the policy which the better managed roads were trying to carry out. And the definition of "similar circumstances" adopted by the Commission just about covered the exceptions which such roads had found themselves forced to make in pursuing that policy. They had in many instances made special rates which violated the short-haul principle, on grounds which the Commissioners had pronounced indispensable; but their tariff rates were in general conformity with it, except as they were affected by uncontrolled water competition. The weaker roads were the only ones that suffered much, or found much difficulty in conforming to the requirements of the Act. The Commissioners report that this section is quite generally obeyed throughout the North and East, and in general by the more powerful corporations passing through rich districts; that the exceptions which still remain are chiefly on the Southern and Transcontinental lines. The roads that suffer are the ones which must have a share of the through traffic in order to live, and must make special concessions in order to secure it.

The difficulty of applying this section of the Act will be much diminished if other transportation agencies besides railroads be subjected to its provisions. The Commissioners distinctly recommend that it be extended to include express companies, and suggest that it might be

applied to water transportation also. Were this done, the general result of the changed system of rates would not improbably be to the distinct advantage of the railroads: the only serious sufferers would be the minor distributing centres, which would be deprived of some of the special advantages that they have hitherto enjoyed.

But, while the conflict between the short-haul clause and the practice of the better railroads was thus rendered less sharp than had been expected, the general sections against discrimination were applied with a vigor which surprised every one.

When the Act was first passed, the railroads made a strong and, on the whole, surprisingly successful effort to do away with personal discrimination in some of its worst forms. They had abolished the free-pass system in so thorough-going a fashion as to produce no little outcry from those people who thought they had a prescriptive right to travel without paying for it. They had terminated their contracts with individual shippers so generally as greatly to surprise those observers who knew how deeply rooted was the system in the railroad practice of the country. Direct, personal discriminations in rates almost ceased: where the law was violated in this respect, it was by false description of goods, false weight or classification, rather than by direct rebates or differences in charge. Having gone as far as this, the railroads thought that they were safe.

They were mistaken. The Commission soon showed that they intended to have these sections against discrimination applied to the fullest extent. The law allowed the railroads to sell mileage tickets; but the Commission insisted that they must be sold to all persons impartially, and not at reduced rates to particular classes of travellers, even when such reductions were made on grounds which might seem beneficial to the public as well as the railroads. The law said that the railroads must treat all

shippers of freight alike: the Commission insisted that the railroad agents must obey the spirit as well as the letter of this section. In *Keith v. Kentucky Central*, it was held that exclusive contracts for terminal facilities were unlawful; that a common carrier of live stock is subject to the legal duty to provide reasonable and proper facilities for receiving and discharging from its cars such live stock as is offered for transportation, free of all except the customary transportation charges. It did not fully discharge this duty by receiving on and discharging from its cars live stock at a depot access to which must be purchased. In *Providence Coal Co. v. Providence and Worcester*, it was held that the railroads could not lawfully make allowances for large shipments, which would give one dealer an advantage over his smaller rivals. The railroads might make lower rates for carloads than for parcels: this was a necessity of railroad economy. But in dealing with larger quantities, even though some advantage was realized by the railroads from the centralized shipments, their duty as common carriers forbade them to apply the wholesale principle on such. Their obligation to treat their customers equally could not be set aside on the ground of any economy in dealing with one man rather than several.

These decisions were important, because they struck directly at some of the worst abuses in American railroad management. It was the violation of these principles which had given rise to scandals like those connected with the Standard Oil Company. It was a source of general satisfaction to see the sections thus construed and applied. But there was another series of decisions, whose wisdom was more doubtful, where the Commissioners strove to prohibit local discrimination under these general sections. In the case last cited (*Providence Coal Company v. Providence and Worcester*), they required that the charges to Providence on one branch should be as low as to East Providence on another, although the former was so

crowded with traffic that it was much more convenient for the railroad to deliver freight at the other. In two cases with regard to Dakota wheat, the Commission insisted that rates on one branch could not be made independent of those on another branch of the same line, and made positive orders with regard to the amount which the company should be permitted to charge. The decisions in these cases practically assume the rate-making power for the Commission, and there is every indication that they will be called upon to apply it extensively. There is no doubt that the wording of the sections against discrimination applies to local as well as personal differences: there is some serious doubt how far a body of five men, however wise, can undertake to make railroad rates for the country.

But these doubts and difficulties belong to the future. Thus far, the career of the Commission has been a brilliant success. Instead of nullifying the law, they have made it enforceable. They have given it a construction and an application which really mean something. In so doing, they have created and are creating a body of transportation law, outside of the Act itself. They are wanting in many of the external characteristics of a court. But they have this most important characteristic, which counts for more than anything else: that their decisions are quoted as law, and are being successfully enforced, where other courts, with far greater nominal authority, have failed to accomplish their object. How is it that five men, with so little apparent power and without the authority which long usage confers, have been able to succeed where their predecessors have failed?

It is because they understand railroad business sufficiently to choose principles which can be really carried out, instead of relying on analogies and traditions derived from a totally different system of transportation and production. The tradition of the courts was that rates should be based upon cost of service. It was never systematically

applied even by those who enunciated it. So acute a thinker as Adam Smith spoke in almost the same breath of the necessity of basing tolls upon cost of service and the fact that pleasure carriages are charged higher rates than drays, without apparently perceiving that the facts contradicted the theory. Neither in turnpike nor canal tolls was the principle ever consistently carried out. Rates were based upon value or upon what the traffic would bear, quite as much as upon cost of service; and in the very earliest English railroad charters, which were based upon the model of canal charters, great varieties in rates were allowed on the same goods according as they were intended for export or for home consumption. Nevertheless, the courts clung to the theory of cost of service as a basis for differences in charge. It was the only one which they found it possible to apply readily to cases which were presented to them for action. It seemed at first sight like an easy one. But the effort to make cost the standard really proved the great drawback to all successful attempts on the part of the courts to check railroad discrimination. They had adopted a principle which could not be carried to its logical conclusion without disaster to the business interests of the whole community. The attempt to base regulation of rates upon an impracticable theory had the effect of making all such regulation almost inoperative.

The cost of railroad service consists of two elements,—operating expenses and fixed charges. The former includes the cost of handling and carrying the goods. It consists chiefly of charges for train and station service and supplies. The fixed charges, on the other hand, are those which attach to the business as a whole rather than to any particular part of it: such are interest charges, administrative expenses, and cost of maintenance, so far as this is due to weather rather than to wear. It is a principle of good railroad economy that each piece of traffic should pay its share of the operating expenses. If it did not do so, it

would be better to do without the traffic than to handle it. The exceptions to this are more apparent than real. But it by no means follows that each piece of traffic should pay its share of the fixed charges. On the contrary, if business is of such a character that it can only be secured by the lowest possible rates, any margin, however slight, above operating expenses is an advantage to the railroad. The business is made to contribute something to the fixed charges; while, if it were lost altogether, these charges would remain the same and the means of defraying them would be slightly less. There are very few roads on which shipments of coal or lumber pay anything like their proportion of the fixed charges. But if this coal or lumber business were lost, and nothing left to take its place, the community and the railroads would both be worse off for it.

It may be said broadly that railroad freight is of two kinds. There is valuable traffic, which can pay high rates, but which is, under almost any circumstances, limited in quantity; and there is cheap traffic, which cannot under any circumstances pay high rates, but which under sufficiently low ones may be secured in very large amounts. If a railroad is so rich that it can pay all its interest charges without any special effort, it is possible to pass a law demanding that these two kinds of traffic shall be treated in the same way. But the majority of the railroads are not thus situated. Many of them are scarcely meeting their current obligations. Anything which renders railroad business unprofitable will diminish the extension of facilities which the community needs; and no system of legislation is so sure to render railroad business relatively unprofitable as the attempt to enforce the same treatment for both of these classes.

The cost of handling rich ores differs but slightly from that of handling building stone, but the method by which the two classes of goods can contribute to the support of a railroad is totally different. Within moderate limits, the shipment of ore will be the same whether rates be high or

low. The supply is so far limited that a reduction in charge is apt to go into the pockets of the mine-owners, without seriously affecting the total supply or the general convenience of the community. On the other hand, the attempt to impose high rates on ordinary stone would so far check the traffic as to involve serious loss to every one; while the reduction in rates involves a gain of business to the road and lower prices to the community. From any attempt at enforced equality, the business interests of the country would lose rather than gain. Reduction in the rates on ore would have only a very slight beneficial effect: increase in the rates on stone would have a disastrous one. Either process would interfere with the power of the railroad to meet its fixed charges.

What is true as between different classes of goods is true to a less extent in the comparison between local and through traffic. The former is more or less limited in quantity: the latter can be expanded almost indefinitely. In order that a railroad may be built at all, it is often necessary that it should have the chance of securing relatively high rates on the limited volume of local business and a share in the large and cheaply handled through traffic, which can only be obtained at much lower proportionate rates. If the railroad is to be profitable under the general scale of charges to which railroads are to-day limited, it must have something analogous to the taxing power. It must be able to obtain a larger proportion of the fixed charges from those lines of business where the supply and demand are so limited that they can pay the higher rates with least disturbance of the business relations of the community and of the world. This is the principle of charging what the traffic will bear. The attempt of the courts of England and the United States to apply a different principle has been practically without effect. The attempt which has been made at one time or another in almost every country to fix schedules of rates in disregard of it has proved disastrous to all concerned.

It has so far crippled the railroads that they could not make the needed improvements and extensions, and has so far diminished railroad enterprise and railroad efficiency as to hurt the very men whom it was designed to benefit. The Granger legislation was an instance in point. A brief trial of the levelling principle was sufficient to show that it could not be applied.

Yet these attempts at legislation were often justified by the arbitrary action of the railroads in the application of their own principle. They claimed the right, not merely to use the taxing power, but to be themselves the judges of how it should be applied. Its administration was sometimes in the hands of local freight agents, who granted the special rates to the wrong lines of business and the wrong men,—a short-sighted policy, which might finally react against the railroad itself, but under which the shippers were totally helpless for the time being. Where the system of personal discrimination had taken root, these abuses were intolerable. They were worst of all in times of active railroad war, when the whole system of rates varied from day to day and from place to place.

What the Commission undertook to do was to adopt the railroad principle, but to insist that it should be impartially and equitably applied. They admitted with but slight reservation the theory of the railroad managers, but they did not for a single instant admit their claim to be the sole judges of how it should be applied in practice. They said, in effect, As far as the statutes do not distinctly prohibit it, you may charge what the traffic will bear; but, if you make this a pretext for charging what the traffic will not bear, we shall at once interfere. This was unquestionably the right ground to take. If they had followed the practice of the older courts, and tried to base rates on cost of service, the necessities of business would have been too strong for them, and would have overthrown their principle and their authority. But by taking a ground suited to the necessities of the community, and

one which the better class of railroad men admit and understand, they have laid the basis for a really effective system of regulation. Whatever may be the errors of detail, the fundamental basis of their decisions is sound. It is hardly too much to say that it is the only sound law which we have with regard to railroad rates. Everything else either concedes too much or too little to the discretion of the companies: it either gives them a power which enables them to evade their obligations as common carriers, or it attempts to limit that power on grounds which never could or would be carried to their logical conclusion.

Let us examine the theory of the Commissioners as shown by their actions and utterances:—

1. Rates cannot be based on cost of service.

While cost, as has been said, is an element to be taken into account in the fixing of rates, and one of the very highest importance, it cannot, for reasons well understood, be made the sole basis, but it must in any case be used with caution and reserve. . . . Any attempt to apportion the cost therefore would at the best, and under the most favorable circumstances only reach an approximation. This is so well understood the world over that the propositions which from time to time have been made in other countries to measure the charges of the carrier by the cost of the carriage solely, have always been abandoned after investigation. (1 Interstate Commerce Reports, 63, 64.)

2. It may be good public economy as well as good railroad economy that different kinds of traffic should be treated on different principles, independent of differences in cost of service.

It is very evident from these figures that neither on the local traffic alone, nor on that and the joint traffic can a first-class road be maintained. It is, therefore the right and we may say the duty of the managers of the Central Vermont to obtain and keep up a through business, if they can do so without injustice to the local traffic and without violation of law. No injustice is done to the local traffic by taking through traffic at very low rates, provided the doing so neither makes the local traffic more expensive nor otherwise incommodes it. . . . We are also satisfied that the people of Vermont are largely interested in the low rates on the long-haul traffic. . . . It

is highly probable that if the people of that State pay high rates on local traffic they are fully compensated in the low rates on long-haul traffic. (1 Interstate Commerce Reports, 180.)

Though the Commissioners in this case decided against the legality of the particular rates in question, they did so not because this was unjust discrimination under the general clause, but because the short-haul clause was the law which governed their action, and could not be departed from by them on considerations "of equity or of what would be for the interest of the parties concerned."

Every railroad company ought, when it is practicable, to so arrange its tariffs that the burden upon freights shall be proportional on all portions of its line, and with a view to revenue sufficient to meet all the items of current expense, including the cost of keeping up the road, buildings, and equipment, and of returning a fair profit to owners. But it is obvious that, in some cases, when there is water competition at leading points, it may be impossible to make some portion of the traffic pay its equal proportion of the whole cost. If it can then be made to pay anything toward the cost, above what the taking of it would add to the expense, the railroad ought not, in general, to be forced to reject it, since the surplus, under such circumstances, would be profit. As has been tersely said by M. de la Gournerie, formerly Inspector-General of bridges and railways in France, a railroad "ought not to neglect any traffic of a kind that will increase its receipts more than its expenses"; and long-haul traffic which can only be had on these terms may sometimes be taken without wronging any one, when, to carry all traffic, or even the major part of it, at the like rates, would be simply ruinous. (1 Interstate Commerce Reports, 79.)

For many years it has been the practice of the railroad companies connecting Boston with western points to make the rates from such points to Boston, upon grain and provisions for export, as low as the rates to New York, although the rates upon property for local consumption have during the same time been higher to Boston than to New York, the distance being somewhat greater. The rates to the seaboard and abroad, it was shown, are in effect determined by the shortest line from the interior, which for this purpose is the Pennsylvania line; the other lines conforming substantially to those rates as a security to participation in the traffic. . . . Making the allowance in some form has been essential to the existence of the trade, since the ocean rates from Boston and New York are not materially different

and higher interior rates would exclude Boston altogether from participation in the foreign trade . . . As explained by the petitions and the evidence adduced in their support, the rebate has for its purpose to correct an inequality that would otherwise exist, and which, by making the cost of foreign shipments by way of Boston greater than by way of New York, would practically exclude shippers from the choice of the Boston route, though the distance from interior points to the foreign market would be practically no greater by that route than by the other. . . . If such is the real nature of the so-called rebate . . . and if no discrimination is made between persons engaged in the foreign traffic, but the rebate is paid impartially, and only as a means of protecting the Boston route for the export trade against an excess in charge that would be ruinous to it, then it is obvious there is no occasion for calling upon the Commission to give sanction to a practice which would be legal without it. (1 Interstate Commerce Reports, 24-27.)

3. This principle cannot be held to justify artificial cases of inequality.

It is just as much the duty of the common carrier, in making its low rates on long hauls, to consider whom they may ruin as whom they may build up; and, while the carrier cannot be held responsible for the consequences which flow legitimately from tariffs impartially arranged, it cannot justify on the ground of public benefit the unequal rates which, however beneficial to some, may be equally mischievous to others. A great establishment, strengthened by the favor of public carriers until it acquires the power to crush competition, and actually exercises that power, may by that very fact become an enemy to the civil State; and no benefit it can give to the public, in the low prices of its commodities or otherwise, can compensate for the general sense of wrong which those must feel who are injured by it, or for the sentiment which grows up in view of its operations, that the law fails to give the equality of right and privilege which it nominally promises. (1 Interstate Commerce Reports, 68.)

In applying the principle laid down in this decision the Commissioners will themselves examine whether the traffic will bear a particular rate. In exempting the railroads from the obligation of basing their rates on cost of service, they do not free them from all control. On the other hand, they subject them to a control which may, under certain circumstances, be even more stringent than the other.

While the inhibition of the fourth section of the statute against charging more for a shorter than for a longer distance over the same line does not literally apply, the defendant is, under the circumstances, required to make its rates reasonable on both branches of its road. If the two lines were separately owned and operated, competition might substantially equalize the rates. And the fact that one company controls parallel lines affords no warrant for giving superior advantages to the patrons of one line, and denying similar advantages to those of the other line. It may not be essential that the rates on the two lines should be identical. Some difference on account of greater distance and increased operating expenses, and the conditions affecting the traffic may be reasonably permissible. Nor is it enough that independently considered, as if the parallel line did not exist, the higher rates might be deemed reasonable. They should be relatively reasonable, in view of their relations to each other and their effect upon the public, in order to prevent undue and unreasonable prejudice and disadvantage, and thus in their results become unjust and unreasonable. . . . If the different rates on the two routes worked no hardship or injustice to any one, there would be no occasion for corrective remedies; but when, as the fact was shown in this case, the producers and millers located in the petitioning towns and along that division are seriously injured, and their business disastrously affected by the double flat rates charged them, the public interests are concerned, and a case is presented demanding redress. *These rates obviously preclude competition with the Minneapolis and St. Paul mills and those on the River Division. . . . The act to regulate commerce demands such adjustments of rates as shall not discriminate unduly in favor of the business of certain localities, and prove destructive to similar pursuits in other localities. (Boards of Trade Union of Farmington et al. v. Chicago, Milwaukee and St. Paul, 1 Interstate Commerce Reports, 215.)*

The decision in the case last cited is almost identical in its effects with similar decisions in England: in its grounds and principles, it is totally different. The final reason for enforcing the equality is that the traffic will not bear other treatment. Questions of cost are made an incidental means of determining the amount of inequality permissible, rather than a criterion of the right of the railroads to act as they do. This distinction is important. It shows why the common-law principle of equality may be successfully applied by the Commission when it has

failed in the hands of the courts. Equality based on what the traffic will bear is a very different thing from equality based on cost of service.

The adoption of this basis for equality is simply the recognition of a sound principle of political economy, which we cannot better formulate than in the words of the Commission itself in their report to the Secretary of the Interior. "The question of rates is often quite as much a question between rival interests and localities as between the railroads and any one or more of such localities or interests." "A railroad company may be rather a nominal than a real defendant; the rate, the classification, or the practice complained of may concern some class of its customers who approve and defend it more than does the railroad company itself, and the company might be entirely willing to make the change demanded, but for the fact that its doing so would bring forward a new class of complainants."

This strikes the point squarely. There is not in American railroad practice a collision of interest between shippers as a class and railroad owners as a class. Laws based on the supposition that there was, have done much more harm than good. It is for the interest of the shippers to have railroad profits high, in order that railroad facilities may be increased: it is for the interest of the railroads to reduce their rates, because the progress of invention is constantly making it relatively better economy to do a large traffic at low rates than a small one at high rates. But the real ground for so much well-founded complaint is that railroads have made reductions for one man and not for another; producing an inequality whose benefit to the company is but trifling, while its advantage or injury to the respective classes of shippers is enormous. It was the error of the English Commission that they tried to treat these differences as purely matters of railroad economy. It is the merit of the American Commission to have treated them on broader principles of political economy.

The kind of work begun by the Massachusetts Commissioners nearly twenty years ago is being carried out to-day over a wider field, and applied to far more difficult problems.

For the success of the Commissioners in the past few months must not blind us to the fact that in the immediate future they are likely to meet with a series of difficulties which will tax their skill to the utmost. It is an easy thing for a man who understands the subject to state sound principles. It is a hard thing, however good his understanding and however sound his principles, to apply them to anything so complicated as the railroad business of the United States.

The difficulties under the short-haul clause will probably not be very great. The Commissioners, as we have seen, have generally disclaimed the intention of making exceptions. Where foreign competition existed of such a character as to constitute substantially different circumstances and conditions, the railroads might take the responsibility of making the exceptions themselves. Where such foreign and water competition did not exist, the Commission would not, as a rule, afford any relief. Each decision under the fourth section shut off a vast amount of possible questioning.

But the decisions under the second and third sections have had precisely the opposite effect. They have widened the possible jurisdiction of the Commission, and have opened more questions than they have settled. For instance, in two recent cases against the Chicago, Milwaukee & St. Paul Railroad, it has been held that the discrimination was unreasonable and illegal, if rates on one branch were made much higher than on the other; and the Commission gave orders as to the extent to which reduction in rates must be carried. Where is this process to stop? Will it not involve the assumption of a general rate-making power on the part of the Commission and its agents? Nothing is more difficult than to determine the

relative circumstances and conditions of broad-gauge and narrow-gauge lines. Yet one order has been made which involves a determination on this point. There is hardly a railroad which owns lines of both classes against which this order may not furnish a precedent for possible complaints.

Again, the short-haul clause prevents the roads from granting lower rates to through points than to local ones. The railroads have to some extent evaded that requirement by a system of carload rates. Compared with parcel rates from the same locality, the difference in carload rates seems unreasonably great. But the railroads assert, and probably with good reason, that the business of the distributing centres is largely carload business, or at least can be accepted and treated as such, while the business of local points is chiefly parcels business; that there is, therefore, a general fairness in the system apart from special cases of apparent injustice. The Commissioners have already admitted in so many words that the through business is more economical for the railroads, and that it may be desirable on considerations of equity to enable them to offer specially low rates to such business. How far will they apply this principle to the carload-rate case? Whichever way they decide this question, the consequences will be important to the country and rather critical for the Commission. If they allow the present practice, they allow the continuance of favors to large distributing centres, they will perpetuate indefinitely the division of labor between city and country, which it was the object of the most active promoters of the law to prevent. If, on the other hand, they decide against the legality of the practice, they will interfere with existing business methods to a most dangerous extent, in the enforcement of a principle whose equity they have themselves called in question.

Finally, the possible difficulties in the enforcement of the law are greatly increased by the prohibition of pools.

The motives which led to this prohibition have already been indicated. But, whatever may be the opinion as to the need for such prohibition, there can be no doubt whatever that it renders the difficulties of the Commission vastly greater.

In the first place, the prohibition of pools greatly increases the difficulty of the railroads in maintaining systematic tariffs. This has not been as yet clearly perceived, because through rates during the past months have been extremely well maintained. When the new law went into effect, the railroad men did not know what were their rights or their duties under it. One thing they knew,—that they were tired of fighting, and were glad to make the law for the time being a pretext for the cessation of rate wars. The danger of disobeying the law was greater than the danger of suffering from the cut rates of a rival. But there is reason to fear that this state of things cannot last. The railroads cannot keep it up, even if they would. The recent condition of things in the dressed-meat business is instructive. This is now in the hands of a comparatively small number of large shippers. One shipper at least threatened to withdraw his business from the Grand Trunk, unless that line would grant lower rates than the others. To do without this business would have involved an appreciable loss to the Grand Trunk. But the other roads could not grant the differential without danger that the other large shippers would transfer their business to the Grand Trunk. Under the old system of pools, the matter would have taken care of itself. Under the present system, there was no possible solution without a war of rates. The Grand Trunk could not do without the differential: the other roads could not admit it. Where business was so compactly organized that the shippers could transfer it almost at will from one road to another, they had it in their power to precipitate a war of rates. The instructive thing in the whole case is that this was probably done on purpose; that the Grand

Trunk, as well as the other roads, was reluctant to enter into such a war, but that as long as rates were at any figure above operating expenses they could be forced into it. In other words, it means that, in the absence of a pooling system, a combination of shippers has the power to avoid paying anything like a fair share of the fixed charges. A statute for prohibiting railroad pools has transferred the authority to a less known and less responsible pool of shippers.\* What were the results in the case of the Standard Oil Company before the trunk-line pool had developed, we know only too well. There seems to be danger that the same kind of result will follow in other lines of business now that pools are prohibited.

The German government was so strongly impressed with the fact that even State railroads under similar conditions were at the mercy of a ring of shippers, that it has not only legalized pools and practised pooling, but has of late actually forbidden the shippers to prescribe the route over which their traffic shall be carried. In other words, it has not merely allowed division of traffic, but has prohibited everything else. It remains to be seen whether our railroads are strong enough to resist the demands of organized shippers, when the State railroads of Germany could not, under similar circumstances, do the same thing.

But there is another respect in which the possibility of rate war greatly complicates the workings of the Interstate Commerce Law. When rates are maintained and railroads relatively prosperous, it is possible to do a great many things which are otherwise impossible. A railroad which is paying ten per cent. dividends can be regulated a great deal more severely than one which can barely preserve its property from foreclosure. The very weakness of railroads constitutes a source of strength for resisting government interference. If a particular series of decisions

\*The railroads are trying to meet the difficulty by evading the clause against pools,—adopting a policy which will virtually result in division of traffic, without violating the letter of the law.

or statutes palpably lessens the railroad facilities of a community, it becomes much harder to enforce them. The more railroad profits are reduced, the greater the number of cases where this difficulty is felt. It is here that the laws of political economy produce their final adjustment. If a line of policy makes railroad profits unusually high, the country gets more railroads; if it makes profits low, there are fewer railroads. The lines may not always be wisely built or well operated, but the general effect is incontestable. A country with an artificial system of rates based upon cost of service will have fewer railroads and smaller train service in proportion to its population. Germany and France have less than Belgium; Belgium has less than England; England, less than America. If America had been content with as little train service per head of population as Germany has to-day, America could have had almost any system of rates she pleased. But America was not content. Railroad enterprise was a necessity to the growth of the country. If it was found that a particular system of railroad regulation stopped railroad development, the application of that system was checked. The principle was slow in working out its results, because, if a railroad was once built, it was there more or less permanently. But this was not sufficient to prevent the reaction against excessive regulation from being felt. Growth was a necessity for our railroad system. If the laws caused railroads to remain stationary, the community suffered, and sooner or later modified the laws or suffered them to remain in abeyance.

If the Interstate Commerce Law, whether by its prohibition of pools or by its provisions with regard to discriminations, seriously reduces railroad profits, this difficulty will make itself felt. The Commissioners are undoubtedly aware of the danger, but they do not seem to have a full conception of its magnitude. They have more than once spoken as though a railroad by lowering its charges on one line of traffic took the opportunity to make up for it

by a different policy on some other article (compare 1 Interstate Commerce Reports, 66). This view has almost no foundation in fact. If a railroad has had a tariff arranged with even moderate intelligence, a loss on one article due to some disturbance of rates is not made up on other articles. If the loss is only temporary, it is often made up by some slight manipulation of the construction account; but sooner or later it comes out of the pockets of the stockholders. The Commission are right in making the question whether rates are relatively reasonable the important one. But this is not because the low rates in one case are made up by the higher rates in the other. There is not one case in a thousand where the high rates are raised because of the existence of the lower ones. They simply are harder to bear on account of the advantage which the man who gets the low rates has for competing in the markets of the world. Whatever direct loss there is from the low rates comes from the railroad owners.

It is impossible to say where the loss in railroad enterprise begins to be greater than the gain from stopping artificial inequalities. The point is very easy to pass: it is the duty of the Commission to see that we do not pass it. It fortunately happens that the system of railroad rates is such that some of the worst abuses can be checked without serious loss to the railroads; and, on the other hand, that some of those things which are popularly complained of, and whose cessation would involve great loss to the railroads, really do very little harm to any one. If the Commission can so interpret the law as to prohibit practices of the former class and allow those of the latter class to continue, they will have solved their problem as far as it is capable of solution. The general principles which they have chosen are so good that there is every reason to hope they will be equally successful in the more difficult task of applying them to doubtful cases.

ARTHUR T. HADLEY.

## THE RATE OF INTEREST AND THE LAWS OF DISTRIBUTION.

IN a trenchant article in the April number of the *Quarterly Journal of Economics*, President F. A. Walker has restated, with all his accustomed lucidity and wealth of illustration, the special doctrine of "rent of ability" being the real source of business profit, which attracted so much attention among economists on the publication of his *Political Economy* four years ago. The theory that the normal "wages of superintendence" are determined in a manner exactly analogous to that in which "Ricardian rent" of land is fixed has already found wide acceptance among American and English economists, and will undoubtedly form a main factor in that reconstruction of the theory of wealth distribution now being undertaken.

President Walker, indeed, holds that the doctrine of "rent of ability" itself furnishes the last link that was wanting to the completion of the theory, and that it "yields, in conjunction with well-approved theories of rent, interest, and wages, a complete and consistent body of doctrine regarding the distribution of wealth. It is not to be disputed that we have, in this view of business profits, the keystone to bind together the other members of the arch in a symmetrical whole, spanning the entire field of distribution." While fully accepting this statement, as far as regards rent and the "wages of superintendence," I venture to think that some further development of the doctrine of interest on capital will be necessary before the problem of income distribution is completely solved. The share of the annual produce defined as interest must be determined as accurately as the other three shares, and independently of all of them, before we can be assured that our assumptions are even theoretically correct.

The article in question deals only incidentally with the determination of the amount of interest on capital; but, as President Walker does not hint at any novelty, I shall perhaps not be doing him any injustice in quoting his own words as a convenient summary of the current doctrine:

Interest is to be deducted as the remuneration for the use of capital, its amount being determined by the relation of supply and demand, but always tending, through the operation of a natural law on which all economists, from Adam Smith down, have delighted to dwell, towards a minimum,—the minimum, in the case of interest, being that rate which will induce the possessors of wealth to refrain from consuming it for the immediate gratification of their tastes and appetites, and to save and store it up to the extent of making good the waste and wear of the existing stock of capital and of answering the demands for the enlargement of that stock to meet new occasions for productive expenditure. This condition may imply, in one state of society, an interest rate of eight per cent.; in another, of five; in another, of three. But, whenever the rate is eight per cent., it continually tends to become five; and, whenever it is five, it continually tends to become three, inasmuch as the occasions for an increased expenditure of wealth for productive uses are certain to be transcended, at any given rate of interest, by the rapid accumulations of capital, which go forward by geometrical progression.

I venture to suggest that this doctrine, even if correct, affords no such sufficient determination of the share of interest, in relation to the other shares of the annual produce, as would warrant us in accepting it as adequate for a theory of distribution. It is one of the acute remarks in Mr. Henry George's *Progress and Poverty* that, "in the current statement, the laws of distribution have no common centre, no mutual relation; they are not the corresponding divisions of a whole, but measures of different qualities." (Book III. chap. vii.) It appears to me that the current doctrine of interest, as here applied in a theory of distribution, is another surviving remnant of those obsolete economic errors which incited Mr. George's eloquent but ill-judged onslaught. It has no "mutual relation" with the laws of rent, wages, and rent of ability.

It is not defined in the same terms. It is by no means apparent that it exactly completes the annual sum of produce to be divided. Let us suppose that there is an exceptionally large produce due to natural causes one year: does the surplus go to rent, interest, rent of ability, or wages? That such an event might ultimately tend to increase wages, as President Walker would suggest, may be admitted (though not because wages take the residual product); but the problem to be solved is the classification of the produce of each year, and the laws of distribution must all be given in similar terms, so as theoretically to account for the whole annual product, and to account for it with scientific exactness.

Many other criticisms on the theory of interest might be made, did time permit. It might be observed, for instance, that, whereas rent, wages, and rent of ability are defined as amounts, interest is spoken of as a "rate." But we are concerned with dividing an aggregate amount; and the law of interest must therefore be given in terms of quantity, and not in terms of a percentage upon an element outside the problem, such as the pecuniary valuation of the capital stock, which itself depends upon the current rate of interest. Professor Sidgwick has abundantly shown \* that this leads to considerations of a very complex character, and it is clear that the *amount* of the produce to be assigned to interest is not thereby determined.

But the theory has been attacked in an even more fundamental point. It is by no means admitted that the accumulation of capital depends solely or even mainly upon the rate of interest. Economists have always laid stress upon the other motives for thrift, which led, for instance, the French peasant up to 1871 and the Maltese cottager up to 1886 to hoard metallic currency without the inducement of interest at all. The enormous and universal increase of investments in savings banks, where

\* *Principles of Political Economy*, Book II. chap. vi.

but trifling interest is paid, shows how little the rate affects even the investment of capital. Indeed, there are everywhere a large number of depositors in savings banks who deliberately exceed the limit on which interest is allowed, content to get only safe custody for their savings. And Professor Marshall, moreover, ingeniously shows that the rate of interest acts partly in a contrary direction, stimulating accumulation in some directions to a greater degree when the rate is low than when it is high.

The fact is that President Walker has as yet failed to carry on to interest that powerful economic analysis which he has already applied with so much success to rent, profits, and wages. Throughout the whole science, it is of the utmost importance to distinguish between what are merely scientific categories, not necessarily possessing separate objective existence, and those actual payments from man to man which are often called by the same name. President Walker does not deal with the rent actually paid by Farmer Jones to his squire, nor with the wages paid by Jones to his laborers. It is with rent and wages as scientific categories that he is dealing, and he makes abundantly clear to how great an extent the economic rent and wages may differ from the payments popularly known by those names. But, when he comes to treat of interest, he is content to confine his view to the actual payment made by the borrower of a certain form of capital to the lender of it. But suppose the lender of it reclaims the loan, and uses the capital himself: does he cease to obtain interest? It may be confidently asserted that, in political economy, interest has no more to do with the lending of capital than rent with the hiring of land, and that the popular "rate of interest" is no more the interest with which we are concerned than the annual price of an Irish holding is the "economic rent" of that plot of land. It is evident that something

more than a reference to the market rate for loans on good mortgage security is necessary, before the doctrine of interest can be brought into line in a complete theory of distribution.

It will be well here to guard somewhat further against what is a serious ambiguity of language. Professor Sidgwick \* has already pointed out the difficulty, as well as the necessity, of distinguishing accurately between "the interest paid to professional lenders of money" and "interest in the sense with which we are concerned with it in the theory of distribution." But there are, in reality, four senses in which the word "interest" is commonly used, all to be carefully distinguished by scientific economists : —

1. The current *rate* paid "in the money market" for short loans of credit or capital in certain forms (chiefly legal tender currency). This is sometimes called the "rate of discount," and it depends on the relative supply of the particular form of capital.
2. The current *rate* paid for more permanent loans on good security. This may conveniently be distinguished as "loan interest": it varies quite independently of the rate of discount, which it usually exceeds, and it depends on the relative supply of capital in any mobile form seeking durable investment.
3. The normal *rate* to which the variations in the current rate of "loan interest" tend to conform over a long period in any community. This is the "interest" usually dealt with by economists, which "tends to equality" and to decline.

None of these can be the "interest" to be defined as a share in the distribution of the annual product, if only because each of them is merely a percentage rate on an arbitrary valuation of an element not within the definition. The interest with which we are concerned must

\* *Principles of Political Economy*, Book II. chap. vi.

clearly be a definable *quantity* of produce. I propose to call it "economic interest," and to define it provisionally as

4. The amount of the annual produce after deduction of economic rent of land, rent of ability, and normal wages.

It will therefore be seen that this definition makes interest the residuary element instead of wages. It remains to justify this by independent definition of the share designated "economic interest," and by demonstrating its place in the theory of distribution.

The weak point of the usual theories as to the distribution of income is that they ignore the prior determination of the distribution of the Means of Production. It appears to me impossible to work out a consistent and complete theory as to rent, interest, profits, and wages, without first postulating an economically normal distribution of labor, skill, and capital upon the land. I shall therefore attempt a preliminary sketch of this distribution in a state of economic equilibrium.

The annual produce of an advanced industrial community consists of a complex aggregate of commodities and services, produced under the most diverse conditions, varying indefinitely in advantage. The soil, that great mother of all utility, differs in fertility from field to field and from mine to mine. The other physical conditions of industry, such as climate, temperature, supply of sources of energy, and the like, are of equal variety. Human knowledge and skill, without which all labor is in vain, vary from individual to individual. Capital affords more aid to the hands of the laborer in one position and in one occupation than in another. And other monopolies, by no means wholly artificial, interpose, as we shall see, to an important extent, to prevent equality of return to equivalent toil. It is this inequality of return which is the cause alike of rent, interest, and rent of ability; and our task is now to distinguish them from wages and from each other.

Each worker endeavors to secure a position in which his labor will be applied under the most favorable circumstances, and competes with his brethren throughout the industrial community in a struggle for the fortunate opportunities. But the operation of the "law of diminishing return" prevents them all crowding, like flies on a honey-pot, to the best site. Instead of the whole wealth production being concentrated at one point, the maximum net utility (that is, commodity in proportion to "efforts and sacrifices") will be found to result from one particular arrangement of labor, skill, and capital upon the land; and it is to this particular distribution of these elements that industrial communities must steadily tend. The ideally perfect arrangement may never be actually reached, since it must be itself constantly changing as the complex conditions of international relations alter. But the play of economic forces causes a steady approximation to this "line of least resistance," and it may therefore be assumed as the normal in our theoretic statement.

This normal distribution of the Means of Production, producing the maximum return of utility in proportion to "efforts and sacrifices," can be proved mathematically to be that in which the last "dose" of capital, skill, and human energy, applied at any point, causes as great a return for equivalent labor as the last "dose" applied anywhere else. The distribution of the means of production over the earth constantly tends to conform everywhere to this law of "equal returns to the last increments."

Of the main factors in wealth production, one large class — the land and the other physical conditions, such as climate, temperature, or water power — are fixed, as regards position in space, so as to be almost entirely beyond human control in this respect. In our industrial co-operation, we must therefore bring Mahomet to the mountain, and form the requisite ideal combination by

varying the amount of human energy, skill, and capital applied to particular sites. We must of course assume, in this pure theory of economic distribution, that perfect frictionless mobility and universal omniscience prevail throughout the industrial community.

Human energy, in the form of ordinary labor force (omitting for the moment skill and capital), will obviously tend to be so distributed upon the land that the return of commodities produced by the last increment of force applied to any particular field will yield just as much as it would have done if added to that being applied to any other field. The return to the first labor force on the fertile Lothians will be much greater than the return to the first labor force applied to the rocky slopes of Ben Nevis; but it will clearly be economically advantageous not to abandon increased cultivation on the Lothians until the point is reached at which the last increment of labor force produces no more there than the last increment applied in the worst circumstances somewhere else. Up to that point, it would be more advantageous for the worker in the worst circumstances elsewhere to be transferred to the as yet unexhausted Lothians; and there would be a constant tendency for such transfer to take place. In perfect economic equilibrium, the last worker on each field produces the same amount of commodity per working day.

It is not less clear, though less commonplace, that skill or industrial ability of every kind tends to be distributed in an analogous manner. Its ideal economic distribution is equally expressed by the law of "equal returns to the last increments." But, as ability must always be "fixed and embodied" in particular human beings, and as these must each be taken with the *défauts de ses qualités*, it cannot attain so perfect a mobility as ordinary labor force or capital. Nevertheless, there is a constant tendency for as much ability to be employed in each industrial process

as can be employed there to greater advantage than elsewhere. So long as the employment of a more skilled workman in any concern would cause a greater increase in the aggregate produce than is caused by his employment elsewhere, there will be a constant tendency for the transfer to take place. The return to the last increments of skill employed will, in economic equilibrium, be equal at all places and in all occupations.

We are now prepared to deal with the distribution of capital, the only remaining factor in wealth production. It can, I think, be shown that this, too, is expressed by the same law of "equal returns to the last increments." Capital will tend to flow towards those opportunities in which its use will afford the greatest return. Each worker will be able to enjoy the assistance of as much as he can effectively demand; and the limit of his effective demand is reached when any further addition to the capital he uses would not result in so great an increase of his product as that final increment of capital would enable some other worker to produce. This limit is reached more quickly in the case of some workers than of others; but it is, in economic equilibrium, reached in every case, since, until this happens, there is some worker in a position to attract additional capital to himself from some other employer, by ceding for its use a larger product than that employer could afford. Conversely, the limit cannot economically be permanently overpassed in any case, since, otherwise, the product caused by the use of the last increment of capital would not be equal to what that portion would produce if applied elsewhere. The worker who could thus employ it to greater advantage would be able to cede a larger product for its use than its former user could afford to cede. We shall see hereafter that this equality of return to the last increments of capital is the true form of the ordinary dictum that "profits tend to an equality," so mercilessly exposed by Professor Cliffe Leslie.

The combination of the factors of production in a state of economic equilibrium may therefore be declared to be such that the last increments of labor force, skill, and capital in use at any point cause exactly as great an increase in the aggregate produce as those last increments of the factors cause which are in use at any other point.

We are now in a position to determine the normal distribution of the product of a community in economic equilibrium.

We start from the "margin of cultivation," where ordinary labor force is employed on the worst land in use. We must, at the same time, select the corresponding instance as regards skill and capital, so that we may assume as the datum-line the worker using the minimum of skill and capital, engaged in wealth production under the most unfavorable circumstances. It is obvious that the return to his labor is the measure of the wages of similar workers throughout the community. They do not receive more, because, if they did, our contemplated worker would abandon his outpost on the margin of cultivation, to go and compete with them. They do not receive less, or they would leave their positions to take up farms alongside of him. His produce includes no economic rent either for land or skill, for he has none of either which others covet; and, though theoretically it may include a trifle of interest for his minimum of capital, we may ignore this as merely equivalent to that "gratuitous capital," such as roads, pavements, and policemen, elsewhere provided free of charge to other producers.

We accordingly reach here a standard of what it will be convenient to call "economic wages," to be defined as the return to the labor of the ordinary unskilled worker, with the minimum of capital, on the worst soil at that time in use, and in the worst natural circumstances. This is the true "margin of cultivation," on which all economic deductions depend. To this normal level the wages of all

unskilled workers tend to come; and from this economic datum-line the extra produce known variously as rent, interest, wages of superintendence, or generally as profits or surplus value, must be computed.

Assuming, as Ricardo and apparently Karl Marx always did, an entirely unregulated increase of population, it is evident that this "economic wages" is coincident with Ricardo's natural or normal wages, and with the wages worked out by Marx as the inevitable result of capitalism; that is to say, the minimum produce upon which the average unskilled laborer will maintain himself sufficiently long to rear a generation to replace him. If, at any moment, the "economic wages" should be in excess of this minimum, the resulting rapid increase of population would force the worst laborers into still worse positions beyond the former "margin," where the return to their work would not be so great. If, on the other hand, it fell below the minimum, there would, *ex hypothesi*, be a diminution of population, which would allow the worst surviving laborer to move to more advantageous surroundings left vacant by this modern "Black Death."

Even Marx, however, did not assert these "normal wages" to be invariable. The minimum requirements of the laborer were admitted by him to vary with his intellectual and moral condition, and to be capable of change. It seems now more correct to say that the amount of the "economic wages" determined by the position of the margin of cultivation is only one of the factors on which variations of population depend, and that the position of the margin of cultivation is itself partly determined by the "standard of comfort," which each social grade does not willingly abandon. Yet much truth unfortunately still remains in the Ricardian and Marxian theory. The involuntary check on population constantly exercises its frightful influence, especially on the infantile death-rate. The death-rate of infants in Bethnal Green is twice that

in Belgravia. If the iron hand of capital be uplifted ever so little, so that market wages rise above normal, fewer of the families of the crowded toilers succumb to the misery of their lot; and the number of their class automatically rises, so as quickly to bring down wages again. This involuntary and automatic action is a potent factor in keeping down unskilled wages to the minimum level in the slums of our great cities. It is the economic form of Mr. Walter Besant's "law of elevenpence ha'penny."

It is unnecessary here to pursue the subject of market wages as compared with normal, or of the different remuneration of the various grades of labor. It must suffice to say that "normal wages" underlie them all, and that any variations from this level are but the result of economic monopoly, temporary or durable, in which other laborers do not share.

It is, however, worth noticing how far the wages class extends. For economic purposes, the share of product (abstraction being made of all "rent of ability" or other monopoly gains) which remunerates the "efforts and sacrifices" of all persons who actually co-operate in production, must be, in the theory of distribution, called wages. The separation from one another of the several grades of workers has, here as elsewhere, tended to obscure the uniformity in character of all the productive classes, which was dwelt upon by Jevons. "Masters" have been in the habit of receiving not "wages" alone, but "profits," which, besides "rent of ability," include interest and often land rent. "Men," on the other hand, often receive much "rent of ability" with their "economic wages." Inventors usually receive not wages, but payments for royalties, and licenses. Accumulators of social capital generally obtain as such no more for their services than absolutely idle inheritors; that is, interest forever on the capital belonging to them. But we must not be misled by this confusion of names or characters. The services of all those

who personally assist the production of utility form — as Jevons pointed out — economically one great class, as opposed to those who do not contribute to social production. The best terms for the remuneration of these services appear to be “rent of ability” and “economic wages,” since the other persons must live on tribute of some kind, usually, in fact, upon economic rent or interest.

This conception of society is assisted by the development of modern industry. Managers tend more and more to be paid by salary in some vast concern, instead of personally taking the “profits” of a small one. Such industrial leviathans now employ their own inventors, at regular wages, to invent and design for them. If these industrial monsters do not yet engage persons at weekly wages to accumulate capital for them, it is because their command of surplus value makes abstension from immediate consumption an easy task, not worth escaping by any such “vicarious atonement.”

With these explanations, we may now leave the share of the aggregate social produce to be known as “economic wages.” It may be summarily defined as the amount of produce produced by the worker at the margin of cultivation with the minimum capital and skill, multiplied by the number of persons actually assisting in social production of utility in any form, whatever the social rank or grade.

But it is in the classification of the remainder of the aggregate produce that the interest of the problem chiefly lies. That there is any product over and above “economic wages,” as above defined, is obviously due to the fact that man labors with varying degrees of efficiency. On the “margin of cultivation,” without skill or capital, the whole of the product is “economic wages.” Any larger product obtained elsewhere by an equivalent amount of labor must be the result of the employment of more advantageous land, of more effective labor, or of

capital. According as it can be ascribed to one or the other of these causes, "surplus value" must be allotted to land rent, to the so-called "rent of ability," or to what is, in an economic sense, interest, however widely it may differ from the actual payment for the hire of capital in the market at any particular moment.

Now, as regards the extra produce over that at the margin of cultivation, which is due to greater advantages of site, there is no difficulty. President Walker has himself well demonstrated how all the various differences fall under the head of "economic rent." He will be prepared to include in this term all advantages permanently fixed to any "immovable," and doubtless also to extend it to those derived from unchangeable and durable forms of capital, such as ships and some heavy machinery.

We are also enabled to put aside the extra produce due to the superior skill or ability of the worker, over and above the commonest unskilled laborer. President Walker has shown how this extra produce, due to the superior ability of the mechanic, foreman, manager, doctor, or statesman, is a real economic rent, to be called "rent of ability." \*

But there is still variation in the product of equal labor under different circumstances, even after allowing for the economic rent of "land" and "ability." In our complex modern industry, we cultivate other things as well as land, and know how to create value at several removes from the mother earth. The use of capital enables the worker to produce more than he otherwise could, in a degree varying with the particular industry and with the circum-

\*It may, however, be submitted for perfect accuracy that it is only "within the limits of the same trade or profession," or at most within competing groups, that the normal remuneration is exactly proportionate to the relative ability as compared with that of the worst worker. As between workers in what Cairnes called "non-competing groups," the remuneration "of the worst worker in each will vary in proportion to the relative final utility" of those kinds of labor,—a conclusion not differing in result from Cairnes's "Law of Reciprocal Demand," but not exactly in accordance with the pure "rent of ability" doctrine.

stances of industrial development. This surplus is not land rent or "rent of ability," for we have already eliminated all resulting from these factors. It is not wages so long as the worker in the worst circumstances is unsupplied with capital equally advantageous, for his scanty product determines "economic wages" all over the community. Surely, the best name for this extra produce, resulting from the use of capital and the enjoyment of special industrial advantages not due to superiority of site or skill, will be simply "economic interest."

We are now in a position to set forth the independent definition of "economic interest," which is necessary to complete the theory of distribution. "Economic interest" is the amount of produce over and above "economic wages" which is obtained through the use of capital, upon land at the margin of cultivation by the skill of the worst worker employed in the industrial community, or upon better land with greater skill, after deduction of the economic rent of the land and ability. This obviously exhausts the whole product; and this, not the "rent of ability," is the real keystone of the arch.

It is submitted that it is this "economic interest," and not the ordinary payment for loan capital, which must be considered as a constituent element in "profits." Business profits would equally exist in a community where borrowing was unknown. Unless President Walker is prepared to say that in such a community these "profits" would exclusively consist of "rent of ability," he must admit that their amount could not in that case be affected by the "rate of interest" in the popular sense; for no such phenomenon would be known.

It is true that the amount of "economic interest" to be obtained from a given quantity (not value) of capital is an important motive for the accumulation of that capital, and that it is possible that accumulation may diminish where the result of the use of capital falls off. But,

unless it can be proved that this is the only motive for accumulation (which it is not), it is clear that it cannot be assumed that the supply of capital is automatically regulated by the return to be obtained from its use, let alone by the current "rate of interest" on the currency valuation of it.

The definition of "economic interest" here attempted enables another gap to be filled in the determination of "profits," which economists are prone to overlook. Profits actually depend, not only on skill and on the amount of capital employed, but largely also upon opportunity and chance. The constantly changing conditions of the industrial community make the economic position of every member of it to vary from day to day. Mere priority and proximity are constantly found to be as effective guards of *temporary* monopoly as a patent or a favorable site. The profits of business depend largely upon seizing those frequently recurring separate advantages; and, though this may be claimed as an element of business ability, it is so much a matter of chance that many of these "wind-falls" must be put down as adventitious advantages of the possession of capital, in a certain form, at a particular point of time and space. This "rent of opportunity" forms a considerable part of "economic interest."

"Economic interest," as here defined, is expressed by a law similar to the Ricardian law of rent. It varies according to the advantage of the particular capital over that minimum capital employed by the worker at the margin of cultivation. That capital yields theoretically no "economic interest," since its amount is so small that it is but the equivalent of capital, the use of which is supplied elsewhere gratuitously to all workers by the community. It may however be objected that the "law of rent" depends also upon the existence of the "law of diminishing return" which has been supposed not to apply to manufacturing industries. I venture to think that this suppo-

sition is erroneous. Capital has its "law of diminishing return," as much as land. The man of business making good profits naturally tries to take the fullest possible advantage of his advantageous opportunity, and borrows loan capital to increase his business. But he, like the farmer with his land, finds that, after a certain not invariable point, an addition of capital ceases to enable the labor employed to obtain a proportionately increased return. Up to that point, the increased economy in production is not counterbalanced by disadvantages; and the undertaking increases. This is equally true of agriculture, as the farmer with insufficient capital finds to his cost. But, when the point is reached, the counterbalancing disadvantages begin to exceed the increased efficiency. It is irresistibly argued that, if this were not true of agriculture, we should raise all our corn in the one most fertile valley. It may equally be urged that, if it were not true of manufactures, we should spin all our cotton in the one most favorably situated gigantic mill. If it were not equally true of distributive industry, one huge shop would supply a city. There is a certain limit to the business which any one industrial concern can carry on to greater advantage than its neighbors. Beyond that point, although a still further increase would offer further economies in establishment charges and the like, it cannot apparently be obtained on remunerative terms. It is not want of capital, or inability to effect greater economies, that prevents Mr. Whiteley from supplying all London. He may probably have reached his point of maximum economic "cultivation," and, though still maintaining his old superiorities, is unable to supply any larger circle of customers to greater advantage than his surviving competitors. The "economic advantage" of a plot of land, or a ship, or a factory, is subject to narrower limits than those set by its greatest possible productivity. Considerations of distance, of local specialities, of difference in taste, and the per-

sonal element, all combine in preventing the "one-man power" in production. God takes care, the child Goethe was informed, that the trees shall not grow up into the sky; and there is still economic use for those of our factories, hands and brains, as well as of our lands, which are not equal to the best in their respective departments. Those who are most favored will produce the greatest utility, but even the best of all will find a limit beyond which the humblest may successfully compete with him. Beyond this point, the "law of diminishing return" becomes effective; and though, for instance, there are in London printing establishments varying in magnitude from the proprietor of a hundred machines down to the jobbing compositor with his hand-press, the actual "cost of production" of the last piece of work performed by each clearly tends constantly to a close equality, for the various businesses continue to compete with each other.

It is in this way that capitalist competes with capitalist. The statement is true that, abstraction made of land and ability rent, "profits"—that is, the return to capital—"tend to equality"; but it is equality only of the return to the last increment of capital employed in each case. The possessor of a prosperous mine or business does not go on increasing it beyond the economic "margin of cultivation" merely because, on an average of the whole capital employed, he could still earn the market rate of interest. He will not borrow to extend his operations unless the extension itself will yield more than the interest on the new capital employed therein. He, like the tiller of the soil, stops at the point where further profit would be a relative loss; and he thus maintains safely the "economic interest" of the more advantageous earlier undertakings.

We thus see that the aggregate gains of business men, like the incomes of landlords or men of genius, in no way tend to equality either of rate or of amount. They often

consist in part of the economic rent of land. They are made up to a still greater degree of the economic rent of ability; and they are completed by "economic interest," varying according to each man's opportunity and to the amount (not value) of capital his business can effectively employ. There is no "tendency to equality" in any of these items, and they vary without reference to each other. There is accordingly no tendency to equality in their aggregates. The amount (and also the proportion of surplus value to wages) varies in each case.

The element of truth in the "tendency of profits to equality" lies in the two facts, that loan capitals, by the "law of indifference," will realize equal loan interests when the circumstances as to risk and other conditions are equal; and that in a state of economic equilibrium the returns to the last increments of capital, wherever applied, will be equal. It may be shown that these two statements are equivalent, and the determination of the rate of interest will then be complete.

We have seen that the capital of an industrial community in economic equilibrium is so distributed that the last increment of it will result in a return less than the return to any of the earlier increments. The amount of that last return will depend upon the facts of each community,—upon the relative position of the "margin of cultivation" of land, capital, and ability respectively. When capital is relatively scarce, so that even the last increment is applied upon fertile land and with considerable ability, the return will be great (and land rent and rent of ability will be small). As capital increases, and the "margin of cultivation" for its employment retreats, the return to the last increment will be less (and land rent or rent of ability, or both, will be greater). It may be added that "economic wages," dependent as they are upon the return to labor at the absolute contemporary "margin of cultivation," may vary independently of "economic interest," though not of economic land rent. The

amount of capital relatively to the amount of fertile land and ability may remain stationary, while the population is increasing. In this case, "economic interest" would be stationary, while all the other shares of the product were varying.

Now, the return to the last increment of capital is the most that a lender of capital can normally obtain for its use. The borrower intends to add the borrowed capital to that which he already employs. It then becomes itself the last increment; and its return, by hypothesis not exceeding the return to the former last increment, is the measure of the maximum loan interest that the borrower will pay. At a loan interest a shade less in amount, it will pay him to extend his business; and he will borrow. At a shade more, he will prefer to stand on the old lines. The normal amount of loan interest will therefore be the return to the last increment of capital within the community; and, by the law of "indifference," this will tend to equality throughout the community. If this return induces an increase of capital, the effect upon "loan interest" depends upon the facts of the community. If all the additional capital can be employed so as to produce a return only fractionally less than the return to the previous "last increment," the normal loan interest will fall only to that small extent, however much the increase of capital may be. If it produces more (*e.g.*, by a simultaneous increase of ability or improved fertility), the normal loan interest will rise, in spite of the increase of capital. These tendencies usually coexist, and the normal loan interest is the resultant.

We have hitherto spoken of the amount of interest, and not the rate. The return to capital is not currency, but commodities. The valuation of the capital, and the valuation of the commodities obtained by its use, is an entirely different and subsidiary problem, not affecting the principles of distribution. The American railways do not produce more utility because their stock is "watered":

the amount of capital and the return to that capital remain unaffected by even the most ingenious of book-keeping transactions. The real inducement to save the amount of capital called £100 is not a nominal rate per cent., but (among other objects) the amount of commodities to be obtained by its use; and this depends in no way upon the number of pieces of metal or paper at which the capital and the interest may be assessed.

If these views be correct, the principles upon which the economic classification of the produce must be determined are complete and mutually consistent. The amount of produce obtained by the labor of the man at the margin of cultivation, with the minimum capital and ability, sets the standard of normal wages throughout the community. The excess produced owing to the greater advantages of better land is economic rent of land. The excess produced owing to the employment of more skilled workers is rent of ability. The excess produced owing to the employment of capital (including the occasional gains due to temporary monopoly or other commercial advantage) should be called "economic interest." The three latter elements all follow the "law of diminishing return," and depend upon the position of the "margin of cultivation" of land, ability, and capital respectively; and this position results from the economic facts of the particular community at any given time.

If this theory be correct, it is evident that along with "profits tend to equality" must go several other cherished principles of the orthodox economics in the fields of taxation, wages, and profits. Those economists who are land nationalizers may find themselves drawn closer to their socialist colleagues. The influence of the progress of industrial organization on profits and wages will need serious reconsideration. But all these matters must be left to abler and more leisured investigators.

SIDNEY WEBB,  
*Lecturer on Economics at the City of London College.*

## NOTES AND MEMORANDA.

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THE article by President Walker, on the "Theory of Business Profits," printed in the third number of this *Journal* for last year, has called forth the criticism and discussion which its author expected, and indeed invited, and has proved to be a valuable stimulus to the fresh examination of some of the fundamentals of economic theory.

President Walker's reply upon some of the points brought forward in the debate we are obliged to postpone for publication in our April number.

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WE understand that the result of the well-known labors of Mr. W. M. Grosvenor on prices will be the production of two volumes, one covering the comparison of prices from January, 1860, to the present time, and the other reviewing, as far as practicable, the course of prices before 1860. Of these volumes, the first is well advanced, and it is hoped may be brought out in the course of the coming summer. The publication will be looked for with great interest; for, besides the fact that the student has to content himself with unsatisfactory material in investigations involving a comparison of American prices, it is well known that Mr. Grosvenor regards the ordinary method of comparison as fatally defective, and that he attempts to apply one of his own, resting upon scientific considerations of no small importance.

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THE death of Dr. Wiss, late editor of the *Vierteljahrschrift für Volkswirtschaft* of Berlin, has led to an arrangement under which Dr. Karl Braun now appears as editor of the periodical, which has so long represented the old school in German economics.

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It is announced that the sixth series of Johns Hopkins University Studies in History and Political Science will consist of

a valuable collection of papers on Co-operation in the United States, prepared under the care of Dr. Ely. Of these papers, several, by Drs. Bemis, Shaw, and Warner, have already appeared in the publications of the American Economic Association; and the entire collection, covering the United States, and bringing together the results of careful research, will present an important mass of facts in the history of co-operation in this country, of which no student can fail to appreciate the high value.

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MR. EDWARD ATKINSON's report on the prospects of bimetallic legislation in Europe, which has been submitted to the Senate by the State Department, hardly makes a positive contribution to our knowledge of the situation. Still, it will doubtless be of service in making more clear the practical impossibility of an international agreement for the coinage of silver. Mr. Atkinson lays special stress on the fact that at present the difference between our ratio and that of the countries of the Latin Union is an insuperable obstacle in the way of such an agreement. It is interesting to note also that he believes that the demand for silver at its present price is fully up to the supply, and that, without further legislation, its price is likely to rise rather than fall.

Students of economics will be indebted to Mr. Atkinson for the valuable appendices which he has caused to be added to his report. These will contain the paper by Professor Greven on the monetary experience of Holland, which was printed in the last issue of this *Journal*; several statements from geologists as to the probable future production of gold and silver; and, not least important, a translation of the second edition of Professor Soetbeer's *Materialien* on the silver question. This great collection of materials—the fruit of great skill and extraordinary diligence—will now be accessible in convenient form. Mr. Atkinson's report will be printed as a Senate Executive Document, and therefore will be obtainable through senators. It will also be printed as one number of the Consular Reports, which are issued by the Bureau of Statistics of the State Department, and in this form will be

distributed by Mr. Worthington C. Ford, the chief of the Bureau.\*

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THE Secretary of the Treasury, calling the attention of Congress, in his Finance Report, to the difficulty and perhaps impossibility of continuing to invest the whole of the surplus in purchases of government bonds, makes some remarks on the sinking fund, which have a less firm tone than that which characterizes his report generally:—

I am not, however, at present disposed to recommend the repeal of the sinking-fund requirements of the present laws. It is probable that the command of these laws can only be obeyed at heavy cost; but, nevertheless, it is better and more wholesome that the country should each year continue to devote such sum as they require to the extinguishment of as much of the interest-bearing debt as can be purchased therewith. At least, the experiment should be faithfully tried until it is demonstrated to be a failure.

As the sinking-fund requirements, established by the act of February 25, 1862, have uniformly been regarded as part of a contract with the public creditors, and never as an experiment or a method to be practised or discontinued at the pleasure of the government, it is to be hoped that no secretary will ever feel "disposed to recommend their repeal." They are to be maintained, even at heavy cost, not only because they are wholesome, but as a matter of public faith. The public credit no longer needs the support which a sinking fund was supposed likely to give it, but the time never comes when a nation can afford to make a precedent by allowing in its own finances what it would not allow in those of a corporation under its control.

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IN the closing number of the Tübingen *Zeitschrift* for 1887, Professor Adolph Wagner, in a second article on "Finanzwissenschaft und Staatssozialismus," having occasion to notice Léon Say's *Le Socialisme d'État* takes the opportunity to cor-

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\* A limited number of copies of the report are to be at the disposal of F. W. Taussig, Cambridge, Mass., who will be glad to send them to teachers and students of economic subjects. Applications should be accompanied by postage stamps for fifteen cents.

rect an observation made by Say respecting Wagner's relations to Prince Bismarck. The correction in Wagner's opinion, although not necessary for German readers, may have some interest for others:—

Say calls me the "theorizer" of the Bismarckian solution of the social question by means of compulsory insurance; and, elsewhere, I am styled the very *spiritus rector* of the Imperial Chancellor in this field. The Imperial Chancellor needs nothing of the sort, and is well known as a man not specially accessible to the theoretical views of others, although he has a good share of the "German" "*doctrinaire* vein," and of the tendency to generalization,—as is shown, for example, by his imperfect theory that the import duties are, in brief, borne by foreigners. At all events, I have personally not had the honor of being Bismarck's "theorizer," and have done nothing to cause such an incorrect idea to be entertained by anybody. In his "theoretical idea," which I hold to be the Chancellor's best and greatest, of devoting the profits of a tobacco monopoly as a *patrimonium pauperum*,—a "patrimony of the disinherited,"—for the support of workingmen's insurance, it was the powerful practical man from whom I, the theorist, received and learned something. In this matter, then, there was *not* the reverse relation between us, as has been falsely represented; for this "idea," so far as I know, sprang solely from the Imperial Chancellor, from whom I at least first received it. I had only discussed some related ideas of expending the product of indirect taxes on consumption, such as bear especially upon the lower classes by action on prices, for public purposes of special benefit for these classes.

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THE *Bulletin de Statistique* for November contains the text of the measures by which the French government has just effected the so-called conversion of about 826,000,000 francs of 4½ per cents. and 11,000,000 of 4s into 3 per cents. The operation, which included a disguised loan, was as follows:—

The holder was offered either reimbursement at par, or the exchange of his securities for an equivalent capital in 3s allotted to him at 80. If he chose the latter alternative, he could also subscribe for enough 3s at 81.1 to bring up his income to its old amount. Thus, the holder of 10,000 francs nominal capital in the 4½ per cents., producing an income of 450 francs, had the right to 10,000 francs in 3s at 80, making a nominal capital of 12,500 and yielding 375 francs per annum, and could also subscribe for 2,500 in 3s at 81.1, yielding 75

francs per annum, and making his total income 450 as before. The rates fixed for the 3s were low enough to bring in for exchange nine-tenths of the  $4\frac{1}{2}$  per cents. and 4s.

This operation, of which the exact results are not yet at hand, did not alter the annual interest charge of the debt, but carried up a nominal capital of about 840,000,000 francs to the neighborhood of 1,250,000,000 francs, and destroys the possibility *pro tanto* of any real conversion in the future. The inducement for this sacrifice was the 210,000,000 or so in ready cash, paid in for new 3 per cents. The precedents for this improvident transaction are the similar operation by M. Fould in 1862, and the exchange of the Morgan loan in 1875. See Labeyrie, *Conversion de Rentes*, 414, 451.

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#### POLITICAL ECONOMY, OLD AND NEW.

[Professor Edward Caird, of Glasgow, in a lecture given in London, October 9, 1887; summed up the debate between the old school in political economy and the new, in the following striking passage, for which our readers are indebted to a friend who was able to transcribe it from Professor Caird's manuscript:—]

Of late years, the old political economy has been much criticised; and there has been a disposition to follow some eminent authorities in relegating it to Jupiter or Saturn. Moreover, the old school has been attacked by two new schools, the historical and the socialist or semi-socialist schools of political economy, who have brought a formidable battery of criticism to bear upon its defects. Poor Adam Smith has had the hard fate of having his doctrines set up to be attacked in Germany under the awful name of *Smithianismus*. Now, I do not deny that there is a good deal of truth in some of the objections brought by such writers, or that the old economists often stated absolutely doctrines which require to be accepted with many limitations. I admit that they had not, as no one before this century ever had, a sufficient grasp of the great idea of development. Hence, they took man as a being who had always been exactly what he had come in the eighteenth century to be; nor did they see how much he had changed and was changing under new conditions. Finally, they were pos-

sessed too exclusively by the individualistic tendency; they were full of the idea of individual liberty, and thought comparatively little of social unity. At the same time, their work was genuine so far as it went: it produced results which will be undervalued only by those who do not understand them,—results which may require modification, but which no economical student can ever neglect with impunity. Those who permit themselves to be carried away by the prevailing tendencies of the present time, and do not thoroughly study the old economical work, as well as the best modern interpreters of it, will never do much good in building up the economy of the future. They will simply be parts of that mob which is always carried away, at every time, by the popular abstraction, and which cries out to-day for social unity, as a century ago it cried out for individual liberty. *Non tali auxilio nec defensoribus istis*: it is not out of such stuff that those are made who will act and write not as blind partisans, but so as to cast a new reconciling light upon the confused conflict of social forces. Speaking to students of economy, I think I am giving the most valuable of counsels when I tell them not to think that they will increase the illumination by selling their old lamps for new, but to remember that he who would make permanent additions to the stock of human knowledge must thoroughly know what has been done already. For the future belongs to those who thoroughly appreciate the achievements of the past.

On the other hand, this being granted, it is equally true that the economical work of the great writers of the last generation cannot, any more than their ethical work, be regarded as final. Partly, as I have said, their method was too abstract; partly, also, the conditions of our social organization are changed. The very gigantic scale of modern industry brings with it something socialistic, or it gives rise at least to necessity for social control, which was not felt so much when commercial enterprise was confined. What is perhaps still more important, the sense of social responsibility has been growing in a way which makes it impossible to isolate the economical problem from the ethical, as the tendency formerly was to isolate it. I do not think it will be possible henceforth to separate

political economy from the general study of politics, or to discuss the laws of the production and distribution of wealth apart from the consideration of the relation of the distribution of wealth, and the modes of distributing it, to other elements of social well-being. The abstraction of science will always be necessary for thorough knowledge of economy, as of everything else; but, when we isolate parts of human existence, it is more important than in relation to any other subject to remember that we *are* abstracting, and that we are dealing with fragments of a whole, of which no final account can be given by anatomy. The practical value of the social science of the future will depend not only on the way in which we break up the complex problem of our existence into manageable parts, but as much, and even more, upon the way in which we are able to gather the elements together again, to see how they act and react upon each other in the living movement of the social body.

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#### EXTENSION OF GERMAN INSURANCE LEGISLATION.

In the last issue of this *Journal* (p. 133), reference was made to a bill in course of preparation in Germany, by which the system of compulsory insurance was to be extended so as to provide pensions in case of old age or disability. At present, provision is made only for the contingencies of accident and sickness; but it has been the intention from the outset to care also for the laborer when permanently disabled or enfeebled by old age. An important step towards this completion of the system has been taken by the preparation of a careful bill, published in the *Norddeutsche Allgemeine Zeitung*, and likely soon to be submitted to the Reichstag.

The new bill proposes to make use of the *Berufsgenossenschaften*, or employers' associations, which are established already for the purpose of carrying and administering insurance against accident, and to call on them to manage the new pension system. Their pension account, of course, is to be kept separate from the accident account; but there is an obvious saving of expense by utilizing the existing machinery. As in the acts for insurance against sickness and accident, all hired

"laborers, assistants, journeymen, apprentices, and servants" are to be insured; and the line at which persons are supposed to be likely or able to provide for their own future is again drawn at administrative officers earning 2,000 marks per year or more. The means for paying the pensions, however, are secured in a manner somewhat different from that of the existing acts. For accident insurance, it will be remembered the employers now contribute the whole amount. For sick insurance, they pay one-third, while two-thirds are deducted from wages. For pensions, it is proposed that the employers shall pay one-third, another third is to be deducted from wages, the last third is borne by the imperial treasury. But the empire bears no share of the running expenses; it pays simply one-third of the total pension payments accruing each year. The pensions are to be 120 marks (\$30) per year in case of old age, and in case of disability are to vary from 120 marks to 250 marks (from \$30 to \$62.50), the sum varying according to the length of time for which contributions have been paid on account of the individual workman. It is, of course, impossible to know in advance what premiums will be necessary to yield these payments, and a permanent scale of contributions is not fixed in the bill, but is to be determined by the Imperial Insurance Bureau within ten years after the act goes into operation. Until such a final scale is arranged, the payments by the employers are to be 4 pfennigs per day, half on their own account, half on the workmen's account. Adding 2 pfennigs from the empire, we get a total premium of 6 pfennigs per day, or 36 marks per working year of three hundred days. In the bill, as it lies before us, it is not clear when its provisions (should it become law) are to go into effect. It is made a condition for getting a pension for old age, which begins with the seventy-first year, that contributions must have been paid during thirty years preceding; and, similarly, payments during at least five years are required for the pension in case of disability. Apparently, no arrangements are made to bridge over the period before these provisions can go into effect.

No doubt, changes will be made in details; but it is more than likely that in its main features this bill will become law.

When this is done, the last step in this remarkable series of measures will have been taken. The German workman will then be provided, partly by deductions from his stipulated wages and partly by payments from his employer and from the state,—which probably will not be without their effect on his wages,—against sickness, accident and death from accident, and incapacity from old age or other cause. He will have no provision, however, in one serious contingency, that of lack of employment. A laborer who is out of work has no claim to indemnity for accident. He can retain his claim for indemnity in case of sickness only if he continues himself to pay his insurance contributions.\* His rights under the pension bill just described are again limited by the time when he is at work and when contributions continue to be paid on his account. For instance, he is obliged to wait thirty years before a right to pension for old age accrues. These thirty years, however, are not calendar years, but years of contribution. Three hundred days for which contributions are paid count as a year. If he is sick, it is true the time still counts for him under the proposed bill, even though no contributions be paid; but if he is out of work, the time is lost. In fact, the alleviation of distress resulting from a laborer's failing to work is left to the ordinary machinery of the poor law. Obviously, one great cause of misery and discontent thereby remains as it was, unaffected by the new legislation. Changes in the poor laws are, it is true, under consideration, and it remains to be seen what may be done in this direction. But unless a considerable departure is made from sound principles in reshaping the poor laws, the insurance legislation is likely to fail in attaining one object, which undoubtedly is prominent in the minds of its framers,—the check to the successful propaganda of the socialists.

On the other hand, it is not easy to see how any other course is open to the German legislators. A guarantee of support and aid, sufficient in amount and not disagreeable in kind, cannot be held out safely to the average laborer for the case of his being out of work. It could result only in shiftlessness and demoralized character. The Malthusian objection would be unanswerable. A writer in a recent issue of the

\* See § 11 of the Sick Insurance Act, vol. ii. p. 115, of this *Journal*.

*Jahrbuch für Gesetzgebung*\* has laid it down that the insurance legislation on its present lines is not inconsistent with the principle of self-help or with the maintenance of sound character, for the very reason that it gives no guarantee of work, or of aid in case there is no work. Whether or not this be true of the legislation so far as it has yet gone, it certainly points out the limits beyond which this or any benevolent legislation cannot go with safety.

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#### WAGES AND PROFITS.

Readers of this review will perhaps expect me to say something in answer to Mr. Macvane's criticisms, in the last number, on the doctrine of Distribution contained in the *Economics of Industry*. I have come across most of his objections before, but never, I think, so ably and coherently stated; and I therefore desire to treat them with all respect. They cover, however, so wide a ground that a full answer here is out of the question. I propose, therefore, to select what seem to me his two most striking points, and submit my own views with regard to them briefly, and without staying to indicate the respects in which they seem to me to differ from those of General Walker.

I regard the wages fund doctrine not as false, but as pretentious and misleading. As explained by careless writers, it is, I think, false. As explained by Cairnes and others, it is so far explained away that there is very little left in it to justify its title, and nothing at all which cannot be expressed better in other ways. Its form is objectionable, because, while not calling attention to the real differences which there are between markets for labor and markets for goods, it implies differences which do not exist; and, after all, it is but a fragment, isolated, discontinuous with the rest of economics, and a hindrance to a scientific conception of the whole subject.

The theory of Normal Wages given in the *Economics of Industry* is not in contradiction to the wages-fund doctrine as explained by Cairnes, but claims to expand and develop that doctrine, and to fit it into its proper place in the whole

\* Dr. H. Thiel, in *Jahrg.* 11, Heft 2, pp. 69-73.

body of economic theory. But Cairnes himself could not get free from the misleading associations of that unfortunate phrase. In one case only does he attempt to apply his doctrine so carefully explained to a practical problem. That one case relates not to Normal Wages, but to Market Wages; and on that we join issue.

He argues (*Leading Principles*, pp. 203, 204) that if there is an increase of labor not accompanied by an increase of capital, and if the labor is of such a kind as to be employed in conjunction with fixed capital and raw material, some of the capital in the island will be diverted to this purpose, that therefore the wages fund will "contract as the supply of labor expands." In opposition to this, it is argued in the *Economics of Industry* (p. 205) that the new labor will instantly "increase the net produce of capital and labor, and therefore the Wages-and-profits Fund. It is true that employers will compete less keenly than before for the hire of labor, partly because there is more labor to be hired, and partly because it will answer their purpose to divert some of their means from hiring laborers to providing more auxiliary capital; and therefore the rate of wages will fall. But it is not certain, nor even very probable, that the whole share which labor gets of the Wages-and-profits Fund will amount to less than before." Mr. Macvane, as I understand, takes this as the crucial point of difference between us. He says (p. 27, note): "There can be no question that this result will follow in the course of time. But will it—as a matter of physical possibility, *can* it—happen at once? Must not the increase begin at the beginning of production?"

I answer: It can happen at once. The moment the laborer is set to work, more partly finished processes of production are finished than would otherwise have been the case, more processes just begun are carried a little further, more new processes are begun. Though the spinner cannot get as his wages to-day the carpet that will be made of the yarn which he spins to-day, there are pretty sure to be enough carpets in store to meet the increased demand due to the increased aggregate of wages, which in my belief there would be; and manufacturers and dealers, knowing that larger supplies than

before are being made, will not hesitate to sell freely from their stocks. Of course, it is true that a sudden and unexpected increase of labor in a place which had no means of importing corn might cause a temporary scarcity of food. But Cairnes, of course, does not assume the increase to take this catastrophic form; and, indeed if he did, what he says about fixed capital would be irrelevant, for in this extreme case there would be a temporary scarcity of food, whether much fixed capital were used or not. His argument shows that he regards the increase of labor as gradual, so that there is time for producers to divert their energies from the production of wage-capital to that of auxiliary capital.

I admit, however, that "the Wages-and-profits *Fund*" is not a good term. I adopted it as a catch-word, to indicate my opinion that wages and profits have their *normal* values determined by causes of the same general character. For that purpose, I retained the latter half of the old term wages-fund. But really what is meant is not a fund of stored up wealth sufficient to afford wages and profits for a fixed period, say a year: it is rather a flow of income to be distributed.

To avoid misapprehension, I should perhaps say that I do not speak of wages as "paid out of the products of industry," in a sense in which this may be understood to mean that labor is not supported by capital. On this point I seem to be in entire agreement with Mr. Macvane. The bargain between labor and capital is doubtless that the wage-receiver gets command over commodities in a form ready for immediate consumption, and in exchange carries his employer's goods a stage further towards being ready for immediate consumption. But, while this is true of most employees, those who finish the processes—*e.g.*, those who put together and finish watches—give to their employers far more commodities in a form ready for immediate consumption than they take from them; and thus the balance is redressed. Taking one season of the year with another, so as to allow for seed and harvest time, workmen as a whole hand over to their employers more finished commodities than they receive as wages. But—to say nothing of machinery and factories, of ships and railroads—the houses loaned to workmen, and even the raw materials in various

stages which will be worked up into commodities consumed by them, represent a far greater advance of capital to them than the equivalent of the advances which they make to the capitalist, even when they work for a month for him before getting any wages.

The other remark of Mr. Macvane to which I desire to reply is one the force of which I think I must have failed to catch; for, if I have understood him rightly, our difference is here a very real one. He says (p. 9): "If a good manager can create as much wealth as one hundred men when good managers are few, he can do the same when good managers are numerous. If his earnings are to be the addition his work makes to the produce of capital and labor, how can mere increase of the number of men capable of thus adding to the produce of capital and labor diminish his earnings? Mr. Marshall, in accounting for the decline, cites as analogous the decline in the wages of skilled labor as the number possessing the skill increases. But there is this fundamental difference between the two cases, which renders analogy between them impossible for the purpose in hand. Skilled labor has specific products of its own, which fall in value as the supply of them is increased. But management has no distinct products of its own. All production needs management, and all products cannot fall in value." Can Mr. Macvane mean that every increase in the output of a business must cause a proportionate increase in its exchange value? His words seem to imply this, but I prefer to suppose that I have misunderstood him. So I will merely restate my own position.

It is well known that great economies have been introduced into many branches of iron manufacture by diminishing the number of times which the metal is heated in passing from pig iron to its final form. Suppose an iron manufacturer with a capital of £50,000 to be getting in normal times a net profit of £4,000 a year, £1,500 of which we may regard as his earnings of management. We assume that so far he has been working in the same way as his neighbors, and showing an amount of ability which, though great, is no more than the normal or average ability of the people who fill such excep-

tionally difficult posts. That is, we assume that £1,500 a year is the normal earnings for the kind of work he has been doing. But, as time goes on, he thinks out a way of dispensing with one of the heatings that have hitherto been customary; and in consequence, without increasing his expenses, he is able to increase his annual output by things which can be sold for £2,000 net. And, so long as he can sell his wares at the old price, his earnings of management will be £2,000 a year above the average. His neighbors, however, will copy his plan; and perhaps, for a while, they will all make more than average profits. But before long competition will increase the supply and lower the price of their wares, until the profits of the business are such as to give only normal earnings of management as before; for no one could get extra high wages for making eggs stand on their ends after Columbus's plan had become public property. As soon as any plan of manufacturing is so far reduced to routine that it no longer requires exceptional ability, those who follow the method add much less to the efficiency of production than they would have done if they had had to think out the method themselves. The production is as great as it would have been; but more of it is due to knowledge which is the common property of the world, and less of it is due to the comparatively commonplace men who are able to follow in the now well-beaten track. Putting aside the gains of speculation, which require to some extent a separate treatment, it remains true that competition tends to secure to each ordinary employer earnings of management equal to what his work adds to the efficiency of production, so much and no more. Inventors and pioneers are seldom able to retain for many years, even if they ever get it, the full value of the addition they make to the efficiency of production. It must, however, be admitted that occasionally a man will complete improvements which others have nearly worked out, and by patenting the last little link which he has added, get more than his deserts.

As to the question what part of his profits should be called rent, I wish to say that I do not attach great importance to this method of speaking in spite of the great support which it has from the traditions of Senior and of many foreign econ-

omists from the time of Storch and Mangoldt (see, for instance, Mataja's *Unternehmergewinn* chap. i., § c.). I regard it only as an analogy, and, moreover, as one which, if pressed too far, is likely to be misleading. In particular, it is difficult to know how much the success of any business man is to be ascribed to his good fortune in getting on work suited to him, and ought therefore to be balanced against the failures of others, who turn out to have selected a wrong occupation for their faculties. When a fisherman makes a good haul, we do not count it as rent: we set it off against the bad haul, and expect him to get in the long run earnings for his labor and interest on his capital, but nothing more; but this brings us to the fringe of a difficult set of problems, which could not be adequately discussed here.

ALFRED MARSHALL.

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#### OCCUPATIONS OF IMMIGRANTS.

Immigration has lately become a staple topic of discussion. The possible necessity of its restriction has been mentioned in public addresses by Senator Cullom and Mr. Chauncey M. Depew. Not long ago, a number of *Public Opinion* contained nearly four pages of extracts from articles on this subject, published in thirty-eight newspapers. The Ohio Republican platform even contains a suggestion of restriction. "We view with alarm," says the platform, in the tritest of all trite political phraseology, "unrestricted emigration from foreign lands." Congress is urged "to pass such laws and establish such regulations as shall protect us from the inroad of the anarchist, the communist, the polygamist, fugitives from justice, the insane, the dependent pauper, the vicious and criminal classes, contract labor in every form, under any name or guise."

The State Department has published a bulky volume of consular reports on immigration, embodying an abridgment of statistics of the occupations of immigrants, taken from the annual reports of the Bureau of Statistics. This bears on the most interesting branch of the general subject. Little information about immigration beyond the number of arrivals reaches the public. Occasionally, attention is called to the

numbers from particular countries, and sometimes an article is published containing estimates of the amount of property brought into the country by immigrants or the economic value of immigrants to the country; but the official reports are seldom searched for anything else. The State Department document referred to does present some figures showing the numbers of skilled and unskilled immigrants; but these of themselves tell little, because it is a question what occupations are skilled. In the reports of the Bureau of Statistics, clerks appear as skilled; while merchants and dealers belong to the miscellaneous category. The State Department tables of occupation are not so full as those published by the Bureau of Statistics, and do not show how few persons belonging to certain leading occupations come to this country.

When the present tariff was under debate in the Senate, there was, of course, a great deal said about the superior condition of working people in this country, and about rates of wages and costs of living; and finally a New England senator brought forward the argument for his side in the following shape:—

There are thousands and thousands of operatives in cotton factories in this country. They are, and are becoming, American citizens. They have come from English cotton factories to ours, and they never go back. Now, no matter who makes tables of statistics, these men know what they have left and what they have come to. They have left their parents and brothers and sisters behind them, and they communicate with them; and they know by a very terrible practical experience what it is to be operatives in English factories, and they have travelled by land and sea to come to ours.

There can be no question about the good faith of the speaker. He believed that the great cotton mills of his own and the neighboring States were filled with operatives who had learned their trades in England or on the continent, and had fled from the starvation wages of the Old World to the peace and plenty of the New; and the same thing was believed on the opposite side of the chamber.

The ten years from 1877 to 1886 inclusive were years of large and small immigration. They were years of prosperity and depression both here and abroad. The period is sufficient

to give value to an analysis of its immigration statistics. In these years, 4,255,295 immigrants arrived in this country. A small fraction more than one-half, being mostly women and children, stated no occupations. The occupations of 2,120,582 immigrants are stated in reports of the Bureau of Statistics, 24 occupations being classed as professional, 133 as skilled, and 42 as miscellaneous. Of all the immigrants, 963,938 are classed simply as laborers. This is about 48 per cent. of all whose occupations are stated. These are absolutely unskilled laborers, for the men who have worked on farms or driven teams or pursued any other occupation that can be named are otherwise enumerated. The farmers and farm laborers numbered 372,339, or about 18 per cent. The servants numbered 177,450. Whether these should be classed as unskilled laborers the American housekeepers can perhaps testify. They make a little more than 8 per cent. The miners were 38,570, or less than 2 per cent. It is true that miners are in a sense skilled, but their wages are so low that they belong with the unskilled laborers and the farm laborers. These laborers with no skill at all, these house servants, these tillers of the soil, and these delvers beneath the soil make a total of 1,552,297, or 73.2 per cent. of all the immigrants whose occupations were stated.

Take now the leading handicrafts. The carpenters furnished 61,967, or nearly 3 per cent. of immigrants with occupations; the blacksmiths, 21,318; the masons, 21,580; the tailors, 22,995; the shoemakers, 22,723; the bakers, 14,677; the butchers, 13,991; and persons classed as engineers, machinists, etc., 13,668. This group of handicraftsmen furnished 192,919 immigrants, or 9.1 per cent. Eleven other handicrafts — namely, stone-cutters, plasterers, plumbers, painters, cabinet-makers, locksmiths, saddle and harness makers, shopwrights, printers, coopers, and hatters — altogether furnished 40,157; and persons classed as mechanics and artisans not otherwise described numbered 23,735. These two groups make another 3 per cent. of the immigrants with occupations. The mariners and the dressmakers and seamstresses are not closely allied; but together they make a little more than 1 per cent., the mariners numbering 14,929, and the dressmakers and seam-

stresses 8,633. The merchants and traders foot up to 64,540, the tobaccoists and workers in tobacco, a mixed class of tradesmen and handicraftsmen, to 9,165, and the clerks to 27,123, the three classes amounting to 100,828, or 4.8 per cent.

The precise effect of the tariff in making our country a land of refuge for the toilers of the Old World is not very apparent in figures thus far. We must get down to smaller figures, in order to find the classes drawn to this country in this manner.

The cotton spinners, the spinners not otherwise described, the silk, wool, and other weavers, the wool-sorters, the operatives not otherwise described, the calico printers, carders of all kinds, and the flax-dressers may be lumped together as employees in textile industries. Of these, only 23,816 are enumerated in the immigration tables for ten years. This is about 1.1 per cent. of all the immigrants with stated occupations, or half that fraction of the total immigration. These being the facts, it appears that there must have been a substantial exaggeration in the statement that there were thousands upon thousands of English cotton operatives in the cotton factories of this country, though, in a certain very narrow sense, the statement is true; for, if there were in our cotton factories four thousand persons who had come from English cotton factories, the language referred to would be strictly true, though unquestionably deceptive.

The other class of occupations most directly affected by our tariff is composed of the workers in metals. If we take all the iron workers mentioned in the tables, divided up into six or eight trades, and add metal rollers and workers, brass-workers and wire-workers, nail-makers, cutlers, and file-makers, we find that workmen in all these trades to the number of 8,133 reached this country in ten years. This is not much more than one-third of one per cent. of the immigrants with occupations.

There are a few other occupations that have received especial encouragement from legislation, but this encouragement has small effect upon immigration. In the ten years under consideration, 713 potters, 206 paper-makers, 767 glass-blowers, 34 hosiers, and 1,912 tanners and curriers came to this coun-

try. If we add together the immigrants in the textiles and metal industries and these five miscellaneous industries, we have a total of only 35,581, or considerably less than 2 per cent. of all the immigrants with occupations.

The thousands upon thousands of foreigners in our cotton mills are to a great extent people who had never been in a cotton mill till they came here. They came here as persons without occupations, or as laborers, or as servants, largely as children, and in the course of their efforts to find something to do drifted into the cotton mills. The same thing is true of the woolen mills and the iron-making establishments. However much our tariff may improve the condition of working people in the protected industries, it does not improve their condition to such an extent as to tempt any very considerable number of people in Europe who have learned the trades to come to this country. If the unskilled laborers and the farm laborers and the servants and miners have intelligence enough to know about the United States, and can get money enough to come here, the more intelligent and better paid operatives in factories and mills could easily get here. There are no means at hand of ascertaining what ratio the number of emigrants from Europe of each class bears to the total number of people in such class in the country from which they emigrate; but the operatives in metals and textiles, etc., are certainly numerous enough to have furnished us with more immigrants than we received, had the temptations which we offered been as alluring to them as they were to the classes industrially below them.

Primarily, it is our land that draws immigrants. The great bulk of them are people who can dig, and who cannot do anything else beyond such supplementary labor upon the soil as is involved in farming. A country of rapidly increasing population builds a great many houses, and requires a great many new coats and shoes; and so the most numerous groups of immigrants after the farmers and diggers and personal attendants are the carpenters and smiths and masons and tailors and shoemakers. The tables afford no evidence that the tariff and any advantages secured by it for those who work upon protected commodities draw people hither from foreign lands.

The emigrant is sometimes described as the enterprising and progressive person of his hamlet; and we sometimes flatter ourselves that we are getting the pick of European workmen, because only the most energetic and ambitious would undertake the dangers of removal to another country. These figures show the contrary. They show that the great bulk of our immigration consists of the people who can find no place in their own country. This immense preponderance of the classes whose wages in Europe are the lowest, and whose lack of acquired skill makes their securing of employment most difficult, shows that we are getting the Europeans who can't get a foothold in their own country,—we are getting what is left over after all the places in Europe are filled.

FRED. PERRY POWERS.

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#### A SUGGESTED REARRANGEMENT OF ECONOMIC STUDY.

It is not often that those scholars to whom the present state of economics seems quite unsatisfactory venture on an explicit statement of the manner in which improvement should take place; but, in the last number of the *Jahrbuch für Gesetzgebung*, Dr. Hasbach presents a scheme for reshaping instruction in economics, which is tantamount to a scheme for reshaping economic science, and which, though not aiming to be more than tentative, yet is given in such detail as to make tolerably clear the extent of the proposed departure from the beaten track. The author is professor in Greifswald, and has been a pupil of Professor Schmoller; and Schmoller himself adds a note, in which he points out wherein he agrees and wherein he does not agree with his former pupil. We have therefore something like an authoritative statement of what the adherents of the more pronounced historical school wish to effect.

Hasbach would begin instruction in economics by a study of industry and of the technical processes of industry,—a study of mining, fishery, forestry, agriculture, the manufacturing arts, and commerce. Charts, illustrations, models, inspection of manufacturing and other establishments, should form part of the teaching, which would therefore be carried on most

advantageously in towns that are near to an active and varied industrial district,—for instance, in Bonn. A previous training in natural science promotes the thoroughness of such study; and the author believes that study in the *Real-Gymnasien*, the non-classical schools, would form an excellent preparation for economics. The next step is the study of economic history,—a subject which Hasbach believes to be hardly more than explored as yet, but still affording materials for a good general presentation. Then comes the study of economic theory. Until the first two stages have been gone through, the student is not equipped for economic theory, because “the theory of economics is an analysis of the economic life of the civilized peoples of our time.” In its domain should be placed all conclusions of a theoretic kind, which the customary arrangement of economics in the hands of German writers puts into the fields of finance and economic policy. Theory is to embrace a larger number of subjects, and bring about a thorough understanding of economic life. The author illustrates his meaning on this point of the enlarged scope of economic theory by explaining that, under the subject of exchange, not only value in exchange, price, and money are to be handled, but a detailed treatment must be given to the subjects of transportation, markets, and exchanges (*Börsen*), weights and measures, money and coinage, moneyed capital and banking, the function of trade and the influence of existing law,—so exact a theoretic treatment to all these topics that “not a corner of economic life shall fail to be lit up.” Elsewhere, he mentions that the question of government management as against private industry, the economic effect of direct taxation, the operation of indirect taxes, are to be taken out of finance into theoretic economics. He believes that, with such full treatment, the insignificance of the field in which deductive treatment is possible will become obvious; and controversy as to methods will be heard less.

This would close economic study proper. Apart from it, but closely connected with it, stand certain other subjects, of which parts are now apt to be included by German writers in the strictly economic field. These are: first, administrative law; second, the investigation of practical economic and social

questions of importance at the time (such as, for our time, bimetallism, American competition, and insurance legislation); and, third, politics, or political science. In other words, the student of economics would have six subjects, or courses of lectures, to pursue; namely, processes of industry, economic history, and economic theory in one group, and administration, practical economic problems, and politics in another group.

But of these subjects, oddly enough, the first three are not to be taught by the professor of political economy. He is to teach only two in the first group,—economic history and economic theory,—while he is also to handle the practical economic problems in the second group,—a shifting of the line of division, which indicates that the attempted discrimination between economics and the related fields of administrative law and politics is not so severely logical as it assumes to be.

Professor Schmoller adds a note to Hasbach's proposal, expressing general agreement with it. He believes that study of the processes of industry is a necessary introduction to that of economics; and he says that he advises every student to attend lectures on economic history before undertaking the study of economic theory. He acts already in the line of his pupil's suggestion by not treating finance as a separate subject. He lectures instead on general financial and administrative history. On other points, he differs. He doubts the expediency of separate departments and faculties of political science, the establishment of which Hasbach advocates. Moreover, he does not believe that a study of natural science is the most useful preparation for that of economics. As the latter belongs to the mental sciences, and its fundamental questions are historical and psychological, a classical and philosophic training gives the best foundation for it.

There is nothing in this proposed rearrangement of a course of extended economic study which is inconsistent with the severest deductive or "orthodox" treatment of the subject. No one will deny the advantages of a careful description of industry and investigation of economic history, though it may be doubted whether as much time should be given to each of these as to economic theory itself. Moreover, the present writer agrees that a fairly detailed analysis of what may be

called the social organism forms the best introduction to economic study, and that treatises and text-books would be improved if their opening chapters consisted mainly of descriptive matter. Dr. Hasbach, however, goes too far in demanding a complete course of study on the processes of industry as indispensable to an understanding of economics. Interesting and useful as such a course might be in itself, much less would serve the economist's purposes. The general drift of the proposal, however, is not without support among writers who have little sympathy with the extreme historical school. Professor Newcomb begins his exposition in his *Principles* with a book entitled "Description of the Social Organism"; and, as was noted in the last issue of this *Journal*,\* the unfinished treatise left by Professor Jevons contemplated a similar introductory part.

That the study of economic history should precede that of economic theory seems quite inadvisable. The value of such study—indeed, the absolute need of it as a means of training in the application of economic principles—is almost beyond dispute. But it helps the student more, if undertaken after a training in economic reasoning, or, at least, side by side with it. Here again, however, there is occasion to dissent rather as to the arrangement and sequence of study than as to the subject-matter to be taught.

Doubtless, a more serious difference of opinion would be brought out if Hasbach and Schmoller had stated more explicitly what they would include under economic theory. The hints of the former indicate that "theory" would include a great deal of matter which others would call descriptive, such as a treatment of coinage, of transportation, of weights and measures. Already, English readers of German treatises (Schönberg's *Handbuch*, for instance) are often at a loss to know where they are, whether in the domain of economic analysis or in that of economic description and practical politics; and this uncertainty would probably be felt still more in a treatise by Schmoller and his pupils. These scholars would probably drop as completely as possible not only those "pedantic accumulations of definitions, disquisitions as to what consumption is, what is production, what is capital," which

\* Vol. ii. p. 65.

Schmoller repudiates with a contempt not entirely without excuse, but also all deductions from the play of human motives under assumed conditions not corresponding literally with the facts of industry. On this point alone, a real and serious disagreement exists between the deductive economists and the advocates of exclusively historical and practical treatment. Even here, we cannot be sure that the disagreement is really serious; for the historians never have stated explicitly how far they would go in flinging away deduced principles. Very likely, a treatise from them, if finally worked out, would show at bottom only a difference in emphasis, in the degree of correctness ascribed to general conclusions, in readiness to apply them at once to practical questions, and not a substantial dissent from the essential principles of classic political economy.

F. W. TAUSSIG.

## CORRESPONDENCE.

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### ECONOMIC THOUGHT IN RUSSIA.

CHARKOV, September, 1887.

LITTLE is to be said about the state of economic literature in Russia. Our economic literature is neither old nor is there much of it. It has had a real existence only within the last thirty years. It is true that economic works were published before, but very rarely. By way of proof, some significant figures may be mentioned. Between 1806 and 1856, no more than 1,500 economic publications appeared: whereas, in the period from 1856 to 1879, the number was 4,500. That is, in the course of half a century there were but one-third as many publications as in the five-and-twenty years following, the production per year being thirty against one hundred and forty. In the earlier period of half a century, the well-known treatises of Adam Smith, Say, and Blanqui were translated into Russian. Only a single treatise of this period can be said to show originality, and to be of some importance,—Butowsky's *On the Wealth of Nations* (1849). Its importance, however, lies only in the fact that it covers the whole field of economics; and it is original only in the sense of not being a translation. The author studied the literature of foreign countries, and presented the results of his studies in Russian.

The state of Russia during this period was such that no literature could well arise. The censorship during the thirty years' reign of Nicholas smothered all thought. State and society were in a condition of stagnation, and there was no stimulus to scientific thought. Literary capacity was rare, and culture was confined to a few hundred high officials.

The year 1856, after the Crimean War, was a turning-point. The war had brought the conviction that the old system of government was untenable. Reform began. The serfs were emancipated, railroads were built, a large number of credit

institutions were created, local self-government was established in cities and provinces. Economic training was required for these measures, and a demand for the study of political economy set in. Political economy became the fashion. The newspapers of that date are full of articles on economic subjects, and a periodical, the *Economist*, was established for their special treatment. But the foundations of economic science did not exist. There were no text-books, and the supply of all kinds of economic literature was deficient. It was of course impossible to write text-books at once; and translations of German, French, and English works were resorted to. The well-known treatises of Roscher, Thünen, Garnier, Ricardo, Mill, McLeod, Carey, appeared in Russian, with more or less of editing and modification. This translated literature maintains itself to our day. Valuable publications appear in foreign countries; and so, for example, we have had recent translations of Cossa's Italian text-book and of the second volume of Marx's *Capital*. But the period of translations has passed; and the most important part is now played, not by translations, but by works written in Russian. Foreign works can teach us only economic principles. We have studied them and learned something from them; but Russian society has its own problems, imperatively demanding solution. These problems have found consideration in the Russian text-books,—the land problem, for instance, the problem of clearing off the dues of the peasantry, and others. In the earlier period there was but one treatise of this kind,—*Principles of Political Economy*, published in 1862 by Gorlov, at that time professor at the University of Petersburg. Other treatises, by Hodsky, Ivanykov, Werden, and Antonovitch, are of very recent date, between 1880 and 1887. All are more or less successful compilations, and all are much influenced by German models.

Our monographic literature deserves more attention. Some monographs are thoroughly independent investigations, and may be compared with the best of similar foreign works. But this is, of course, not the case with the majority; and the average is mediocre. The average quality is certainly below the average, for instance, of German literature. The thoroughness of the Germans is not to be found. The Russian is more super-

ficial, less serious: in this respect, he is rather like the Frenchman. But he is also like the Frenchman in another less unfavorable point. His presentation is clearer than that of the German, his style more simple and less involved. Doubtless, the character of the Russian language has its effect. Its construction is more pliable and permits greater variety than is the case with the German language, with its stiff professorial style. Our language has more resemblance to French and English. Still another peculiarity of Russian literature is this: English, French, and German writers, as a rule, are familiar only with the literature of their own country. Russian authors are more cosmopolitan. German, French, English, and in recent times not unfrequently Italian, works are regarded. Nevertheless and for all that, the average quality is not particularly high. Some monographs come from the pens of youthful writers, and, as might be expected, carry the stamp of their authorship. They are, in the main, dissertations written in order to obtain a degree, and occasionally are patchwork pure and simple.

Finally, we may note the difference between the old and the new *modus scribendi*. In former times, the would-be writer collected a few shelves full of books, read them, and wrote a monograph. A new book was done and ready in the course of a few months. If the writer was empty-headed, an eleventh book was simply added to the other ten. If he was a man of capacity, he enriched the literary supply with a new compilation, but, after all, only a new compilation from the same material. Nowadays, the task is more complicated and difficult, and more is demanded of a monograph. Quite a different procedure has become the fashion. The modern author must collect his material himself, at the place where it lies. He must often make wearisome and expensive journeys; he must search through the large libraries and archives of Berlin, Vienna, Rome, Paris, before he can produce a thorough piece of work. Time and money must be expended. If he has skill in working over his material, the result is good. If he has not such skill, the result is neither good nor bad, but something at least is gained in the shape of the new material. Another writer will not fail to appear, who will be able to make better use of it. This laborious procedure is not necessary for the treatment

of all subjects. Abstract investigations do not demand it; but economic monographs, treating abstract questions of theory, are in the minority, and appear very rarely. In recent years, but one important work of this kind has been published, Siber's *Ricardo and Marx* (1885). Most monographs treat of concrete subjects, and studies of this character prevail largely in the most recent Russian literature.

The majority of our economic works have a practical origin. They owe their existence to the immediate and urgent needs of our social conditions, which have stimulated thought, or at least are closely connected with recent investigations.

The first in order of the questions presented by our social conditions — a question which in its time attracted not a little attention, and made not a little bad blood — was that relating to the peasantry and the land. The emancipation of the serfs in 1861 brought with it the need of regulating the proprietary rights of the peasantry. But almost all peasant proprietorship was and still is ownership by the commune. The question arose whether the government should promote this system of ownership. Some were of the opinion that the commune should be split up, in order to improve agriculture. This opinion aroused great opposition on the part of the Old Russian party, which considered the peasants' commune a sacred thing. The question is a most complicated one, and cannot be answered in a word. Not until recent years has the conviction been reached that the commune must be retained, in order to insure to the peasants their ownership in the land, and this even though it is seen that such a system hampers the progress of agriculture. At present, our literature has hardly any opponents of the communal system. Thirty years ago, however, we were still much in the dark. The government was undecided. The law recognizes both kinds of ownership, communal and individual; and neither is promoted or hampered. Prince Vassilchikov, Messrs. Kavalin and Posnikov (I mention only the most prominent), have done much to clear up this question, and have done excellent service by their extensive monographs on it.\*

\* On the emancipation of the serfs in Russia, we have two comprehensive treatises, by Skrebitzky and Ivanykov.

The next problem was that of agricultural credit on long time. It was supposed that the landed proprietor would need money. The serfs were free; and, in future, workmen would have to be hired. Moreover, many would find it necessary to buy agricultural implements. Hitherto, they had had none, their fields having been tilled by the serfs, with tools belonging to the serfs. Besides, the character of agriculture would undergo a reform; and machines would have to be substituted for manual labor. All this was going to cost money. But at that time there existed none but government banks, whose organization was quite irrational. They made loans for periods of fifty-six years, while their means consisted of deposits payable on demand. They were able to maintain themselves only through the government and by aid from government funds. It was perceived that they were untenable, and it was determined to wind them up. Attention had to be paid to private banks, which, however, had first to be created. At that time, few persons in Russia had any conception of private banking. The first treatise on private banks appeared just at this time, a monograph by the academician Besobrasov, on mortgages, in which different European establishments making loans on long time were described. The old government banks were wound up, and about twenty new joint-stock banks and credit associations were gradually founded. Very rosy ideas of the effect of credit were then entertained by Besobrasov, as well as by others. But one side of the matter was looked at,—the advantages which credit would bring. But an experience of thirty years has now shown that there are two sides to the matter, as there are to most things of this world. Now we know that credit helps only the thorough and careful farmer, but brings ruin to him who is careless and stupid. The landed proprietors now cry out that the banks have plucked them, and made high dividends at the expense of the land-owners; that credit has obliterated the distinction between real and personal property, and taken the land out of the hands of the old nobility and put it into the hands of strangers. A consideration of this disadvantageous side of credit was undertaken by Mr. Hodsky, who published some years ago a thorough treatise on *Agricultural Credit in Russia*. This work rests

mainly on the well-known investigations, in the same field, of the German economist, Rodbertus. The nobility, which is all-powerful in Russia, has been successful within two years in securing of the government the establishment of an exclusive bank for the nobility. It is the object of this institution, which is founded by the government, and belongs to the crown, to compete with the private banks, and to assume, at a low rate of interest, the loans formerly contracted with these banks. It operates by means of mortgages. Its transactions as yet have had no considerable results.

The third great task arose again in consequence of the emancipation of the serfs. The lands of the peasants, which had been in their possession from remote times, but in law had been the property of the gentry, now became private property of the peasants. In order to pay for them, the peasantry were required to pay to the government in the course of forty-nine years the assessed value of each plot. The government on its part used the money so obtained in order to pay the interest and principal of the securities which were given to the land-owners in exchange for their previous possessions. The peasantry, of course, have also to pay various other taxes. Well, it is asserted that their burdens are by no means light. Whether or not this be the case, the fact cannot be disputed that the peasant is often in need of money, that he must pay high rates of interest to get it, and consequently falls into the hands of the usurer. It was endeavored to meet this evil by founding small co-operative credit associations on the model of the Raiffeisen associations in the Rhine provinces, and of the Schulze-Delitzsch associations of Germany in general. Messrs. Luginin, Jakovlev, and Kalypanov have done much in this respect by pamphlets, model statutes, and circulars of information, which they have published at low rates.

Misfortunes never come singly, and no sooner had it become certain that there was a grave question of credit for the peasantry than another difficulty appeared. In many villages, the plots which had been received by the emancipated serfs proved to be too small to support their families. In 1877, Mr. Janson, professor at the University of Petersburg, made a minute statistical investigation of this question, and proved in figures

the insufficiency of the plots received by the peasants. The government had again to step in, and again by means of credit. Two years ago, a government Peasants' Bank was established. If a peasant wishes to buy a plot of land, this bank advances him the money for the purpose, of which principal and interest are to be repaid by an annual payment of six per cent. through twenty-four years. The same privilege exists for communes and for associations of peasants for the purpose of buying land. The bank secures its funds by selling mortgages founded on these transactions and guaranteed by itself. Closely connected with the insufficiency of the peasant's plot of land is the question of his extra earnings. If his plot did not yield enough to support his family, how is he to fight his way? Answer: by various extra earnings as factory workman, as village mechanic, as day laborer. His chief resource is agricultural labor. The peasants of Middle and Northern Russia, where the land is sterile, swarm in spring to Southern Russia, where they work as agricultural laborers on the steppes. For this purpose, and for other purposes where collective work is to be done, they form associations (*artels*). Madame Jefimenko has earned a name in literature by a number of articles in periodicals devoted to this question. Mr. Issajev, professor at the Law School of Jaroslav, has also published a monograph on *artels*, which followed an earlier work on laborers' associations in France and Germany.

Russia's fourth plague is the inconvertible paper money. This currency has existed in Russia since the last century. The Empress Catherine II. introduced it; and, since that time, it has not been possible to root it out. During the great Napoleonic wars at the beginning of this century, the total issue reached 836,000,000 roubles. Their value sank to 42 per cent., then rose to 66 per cent. At the latter rate, the government redeemed them in 1839; and a remainder of 178,000,000 roubles was made convertible into coin. But this state of things lasted only to the time of the Crimean War. In 1854, specie payments were again suspended, and have not yet been resumed. The military expenses increased portentously; and the government turned to the good old

resource, the printing-press, as it had done in the time of Napoleon. The last war with Turkey increased the total paper issues to more than a milliard. That is the present situation. The paper stands at about eighty per cent. as compared with gold. It presents a most difficult task. In order to diminish the quantity of paper money, a new loan would have to be contracted; and the interest, of course, would bring another burden on a budget which already, without this new obligation, struggles with a permanent deficit.

To this objective difficulty, a subjective one must be added. We have our inflationists, as other countries have had them; and, as ill luck would have it, the late influential editor of the *Moscow Gazette*, Katkov, was the head inflationist.† He even succeeded in finding a few favor-currying economists, who worked over his articles and advocated his notions. Mr. Katkov, however, had such influence in Petersburg that he could drive from office any minister who refused to follow his advice. Mr. Kaufmann was the first who published a considerable treatise in Russia on inconvertible paper money. He chose as his subject the period of the suspension of specie payments in England, which he treated from the original sources,—the Parliamentary documents and proceedings,—and from which he proved the nature and effect of paper money. Subsequently, he wrote pamphlets on the resumption of specie payments in Russia. Mr. Bunge, professor at the University of Kiev, and subsequently minister of finance, has published pamphlets on the same subject.

Russia is an agricultural country. Its manufactures are little developed. Many cities have the look of the country, and the main occupation of their inhabitants is still agricultural. Good or bad crops are the important factors for the prosperity of the country. But the grain must find a market. In recent years, this market has been beset with formidable competitors. Fifty years ago, Russia and Hungary provisioned all the rest of Europe. About ten years ago, American grain began to compete with Russian grain, and with no small success. Then came the importation from Australia,

\* [The reader will observe that the present letter is dated some weeks before the death of Katkov.]

and very recently that from India. This competition has caused no little trouble to the Russian grain-grower, and has even induced the government to take some measures. The minister of finance ordered Mr. Orbinsky to proceed to America, to study on the spot the agriculture and the grain trade of the United States. The result of this journey was an interesting and comprehensive book, entitled *The Grain Trade of the United States* (1880). Even before this, the Geographical Society of Petersburg had published a large encyclopedic work, consisting of a number of monographs. The society had requested experts in all the more important centres of the grain trade in Russia to write the results of their observations and to collect statistical material, and the work referred to was the result of these investigations.

Forty years ago, we had not a single railroad. At present there are about twenty-three. Again, it was the Crimean War which proved that it was almost impossible to defend the country without means of transportation. But the railroads have cost much money and a great deal of trouble. The first road was built and managed by the government, and both construction and management proved very expensive. It was then decided to intrust the building of railroads to joint-stock companies. But the condition of the money market in Russia at that time made it impossible to secure the necessary capital on this plan. The joint-stock method was almost unknown in Russia, railroads were new enterprises, and capital was timid. A French company then offered its services. It has built two lines, but has failed to carry out the great plan of providing all Russia with trunk lines. Nevertheless, the company was of service to the country; for it proved to the Russian capitalists, by an object lesson, that railroads are profitable. The Russian capitalists then became enterprising, and were by no means inclined to leave this chance for dividends to remain in the hands of the foreigners. Nevertheless, the greater part of the capital invested in our railroads is still derived from abroad, railway securities finding their chief market in Germany. The history of railway building, during the thirty years which have followed, is a history of vacillating policy by the government. It gives a significant picture of

the hand-to-mouth administration at Petersburg, with its favoritism and its bureaucratic methods. At the outset, the minister of transportation was authorized to select, at his discretion, an *entrepreneur*, who took it on himself to found a stock company. It may be imagined what abuses were connected with this order, or rather disorder, of affairs. Next, public bids were resorted to; but the minister still had the right to set aside the lowest bidder and to select another, under pretext that the latter gave better security for doing the work thoroughly. Again, a pretty system! At last, the government patched up a new plan. The individual *entrepreneur* was decided to be unnecessary, and the government itself forms the company and sells the stock. The stockholders have a general meeting under the superintendence of a government official, and elect directors. Experience shows that the railway magnates buy up the stock through straw-bidders, and get the enterprise into their hands exactly as in old times. Mr. Golovatschov has written a very interesting history of the railway troubles. Mr. Zechanovetzky, at that time professor at the University of Kiev, wrote a history of the English railroad experience, based on the Parliamentary documents. The most important work, however, is one which embraces the whole subject of railroad transportation, written by Mr. Tschugrov, professor at the University of Moscow.

At the present time, we have more than two hundred and ten large joint-stock banks, as many credit associations, and about three hundred smaller city banks. All give commercial credit on short time. Matters have not always been in this condition. As has already been said, time was, especially before the Crimean War, when agricultural credit was granted only by the government banks. The same was the case with commercial credit. At that time there existed but a single important bank of this kind at Petersburg, with a few branches in the larger provincial cities. This single institution, which now has been re-formed and has been enlarged by the addition of fifty branches, belonged to the government. In the provinces there were no more than twenty smaller city banks. Credit hardly existed in Russia, and the nature of credit was not understood. The whole literature on the sub-

ject consisted of two translations of the well-known works of Coquelin and Courcelle-Seneuil. Messrs. Bunge and Besobrasov, whose names have already been mentioned, were the first to treat the theory of credit in Russian; but the first work which treated the entire subject of credit was written again by Mr. Kaufmann. The same author published subsequently a history of the old Italian banks.

In closing, two remarks must be made, lest a false impression be given of the condition of our economic literature. In the first place, this letter has mentioned only the more important publications, and has not considered articles in periodicals. In the second place, the literature of finance, although it doubtless belongs in the field of political economy, has not been considered at all.

H.

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[Chiefly published or announced since October, 1887.]

### I. GENERAL WORKS, THEORY AND ITS HISTORY.

- BRINI (G.).** Le Opere Sociali di Pietro Ellero: Saggio. Bologna: N. Zanichelli. 16mo. pp. 431. 4 fr.
- CATTANEO (C.).** Opere Edite ed Inedite, raccolte da A. Bertani. Vol. IV.: Scritti de Economia Publica, Vol. I. Florence: Succ. Le Monnier. 16mo. pp. 391. 4 fr.
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- LACY (G.).** Liberty and Law. London: Swan, Sonnenschein & Co. 8vo. 12s.
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- CLARK (J. B.).** Profits under Modern Conditions. Pol. Sci. Quarterly, Dec.
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- JOURDAN (A.).** Les Essais de Remaniement de la Science Économique. Rev. d'Écon. Pol., Dec.

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## APPENDIX.

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### "THE NEW-FASHIONED GOLDSMITHS."

The tract which is reprinted in the following pages appears to be the source of the generally accepted statement as to the origin of private banking in London in the seventeenth century. Anderson,\* referring to it as a "scarce and most curious small pamphlet," gives some extracts from it, and thenceforward uses it as a sufficient authority. McPherson does the same, following Anderson † closely in this as in other respects. McCulloch ‡ only cites the two annalists; but McLeod § appears to have used the pamphlet itself, and it is noticed by Macaulay. || Lawson appears to have used it at second-hand. ¶

The date of the tract is stated by Anderson as "about 1676"; and this date is written in an old hand upon the title-page of the copy in the British Museum Library, used in this reprint. "This was a bold Pamphlet at this Time," Anderson adds; "but, although it was printed, it does not appear to have ever been published, there being neither Bookseller's nor Printer's Name prefixed." Anderson's suggestion of possible apprehension of consequences by the printer tallies with the fact that the imprint has been cut off from the title-page of the British Museum copy, leaving only a trace of the words "Printed in."

The authorship of the tract is unknown. Anderson suspects that it may have been written by Sir Josiah Child, but on no ground except Child's repeatedly expressed dislike of "the trade of banking." The anonymous author, however, in his explanation of the "whole imployment" of the goldsmiths "in my time," plainly makes that time precede the civil war. He could hardly have been Sir Josiah Child, then, who was but twelve years old when the civil war broke out.

It should be added that, although the following reprint adheres strictly to the orthography of the original, it is not a *fac-simile*.

D.

\* *Historical and Chronological Deduction of the Origin of Commerce*, II. 77.

† *Annals of Commerce, Manufactures, Fisheries, and Navigation*, II. 427.

‡ *Literature of Political Economy*, 157.

§ *Theory and Practice of Banking*, chap. viii.

|| *History of England*, chap. xx.

¶ *History of Banking*, 189.



The  
Mystery of the New Fashioned  
GOLDSMITHS  
or  
BANKERS.

Their  
Rise, Growth, State and Decay,  
Discovered in a  
Merchant's Letter  
To a  
Country Gent.

Who desired to bind his Son Apprentice to a  
Goldsmith.

---

[London: *circa* 1676.]



## The Myſtery of the New Faſhioned Goldſmiths &c.

---

SIR.

SINCE you are pleaſed to demand my advice in the diſpoſal of your Son to the *Goldſmiths* Trade, and my opinion of the Trade itſelf; I muſt trouble you more than I was willing to ſet down what I have obſerved of the *Goldſmiths* ſince I have Traded, and the ſteps of their Riſe and Progreſs, and leave the judgment of the whole to your Self; tis but fit that a Son ſhould owe the good choice of his employment and way to his fortunes to the prudence and love of his Father.

If I could now diſcourſe you, I ought to be ſatiſfied whether you have thought to put your Son to a *Goldſmith* of the Old or New Faſhion, thoſe of that profeſſion having of late years wholly changed their way of Trading. In my time their whole employment was to make and ſell Plate, to buy forreign Coyns and Gold and Silver imported to melt and cull them, and cauſe ſome to be coyned at the *Mint*, and with the reſt to furniſh the *Refiners*, *Plate-makers*, and *Merchants*, as they found the price of gold and ſilver to vary, and as the Merchants had occaſion for Forreign Coyns.

But about Thirty years ſince, the Civil Wars giving opportunity to Apprentices to leave their Maſters at will, and the old way having been for Merchants to truſt their Caſh in one of their Servants cuſtody, many ſuch Caſhiers left their Maſters in the lurch and went to the Army, and Merchants knew not how to confide in their Apprentices; then did ſome Merchants begin to put their Caſh into *Goldſmiths* hands to receive and pay for them, (thinking it more ſecure) and the trade of Plate being then but little worth, moſt of the Nobility and Gentry,

and others melting down their old Plate rather than buying new, and few daring to use or own Plate, the *Goldsmiths* fought to be the *Merchants* Cash-keepers to receive and pay for nothing, few observing or conjecturing their profit they had for their pains.

It

[4]

It happened about that time that the then Parliament had coyned out of Plate, and otherwise seven Millions in Half-Crowns, and no Mills being then used in the *Mint*, the Money was of a very unequal weight, sometimes two pence or three pence in an ounce difference, & the *French* and others then changing the value of the Coins often, which made silver and gold of much greater value abroad than at our *English Mint*: The *Goldsmiths* found a new Mischievous trade to send all the money trusted in their hands into their Cocklofts, where they had Scales and various Weights adapted for their purpose, and servants constantly weighed every half-crown (at least) and forced them to melt for Two pence or three pence, or sometimes less gain by the ounce, and sometimes their advantage being greater by the accidents of the rise and fall of the exchange, those heaviest Coins were sent away in specie, several *French* men and other Merchants making it their whole and only business weekly to transport the gold and silver so culled, either melted down or in specie; and from hence the *Goldsmiths* set up another new Trade of buying the old English gold coin at a rate much above its Lawful coyned value, buying and selling it at five, seven, eight and ten pounds in the hundred more than it was coyned for, still sending it away so fast, or supplying those with it whose business was to Transport it, that by a modest computation eight parts of ten of the coyn'd Gold was suddenly consumed, and two shillings a piece was commonly given for gold, when a penny a piece was often given before to exchange gold into silver; the Seven Millions also of silver

<sup>1</sup>[Among the causes of this disappearance of English gold, we must reckon, besides the bad condition of the silver coinage, the change in the relative value of gold and silver, which led in 1663 to a reduction in the weight of the gold coin. See Lord Liverpool, *Coins of the Realm*, 77. Leake, *Historical Account of English Money*, 342, after speaking of the ordinance of 1647 against clipped coin, says: "And tho' twenty Millions was coined within twenty-five Years, according to the Mint-Books, it was almost all transported and melted down; so that weighty Gold was as precious in the Kingdom as Diamonds."]

new Coyned, was apparently reduced to less than one Million, and the people so abused in their money, that there was little Coin passed in trade but overworn, washed, and clipt, to the great vexation and loss of the Traders.

These unlawful practices and profits of the *Goldsmiths*, made them greedy to ingross all the Cash they could, and to combine with all mens servants who continued to keep any Cash, to bring their moneys to them to be culled, and to remain with them at four pence the day interest *per centum*<sup>2</sup> without the Masters privity: And having thus got Money into their hands, they presumed upon some to come as fast as others was paid away; and upon that confidence of a running Cash (as they call it) they begun to accomodate men with moneys for Weeks and Moneths upon extraordinary gratuities, and supply all necessitous Merchants that overtraded their Stock, with present Money for their Bills of Exchange, discounting sometimes double, perhaps treble interest for the time as they found the Merchant more or less pinched.

Profit

[5]

Profit arising by this Trade, some of them who had the highest Credit, undertook to receive Gentlemens Rents as they were returned to Town, and indeed any Mans money, and to allow them some interest for it though it lay for a month only, or less, the Owners calling for it by a hundred or fifty pounds at a time as their occasions and expenses wanted it; this new practice giving hopes to everybody to make Profit of their money until the hour they spent it, and the conveniency as they thought, to command their money when they pleased, which they could not do when lent at interest upon personal or real Security; These hopes I say, drew a great Cash into these new *Goldsmiths* hands, and some of them stuck to their old Trade, but every of them that had friends and credit, aspired to this new Mystery to become *Bankers* or *Cashiers*, and when *Cromwell* usurped the Government, the greatest of them began to deal with him to supply his wants of Money upon great Advantages especially after they had bought those Dollers whereof he robb'd the *Spaniards* to about the value of 300000l.<sup>3</sup>

<sup>2</sup> [Fourpence per day on £100 being slightly above six per cent. per annum.]

<sup>3</sup> [This may refer to the capture of some of the plate ships near Cadiz, September 9, 1656, by a part of the fleet commanded by Blake and Montagu. See

After the King's return he wanting money, some of these Bankers undertook to lend him not their own but other mens money, taking barefaced of Him ten pound for the hundred, and by private contracts many Bills, Orders, Tallies, and Debts of the King's, above twenty, and sometimes thirty in the hundred, to the great dishonor of the Government.

This Prodigious unlawful Gain induced all of them that could be credited with moneys at intrest to become lenders to the King to anticipate all the Revenue, to take every Grant of the *Parliament* into pawn as soon as it was given, I had almost said, before the *Act* was passed for it, and to outvie each other in buying and taking to pawn, Bills, Orders, and Tallies, in effect, all the King's revenue passed their hands, and if *Solomon* be in the right, *that the Borrower is a Slave to the Lender*, the King and Kingdom became Slaves to these *Bankers*, and the Kingdom gave no small share of their Taxes to them, paying double and treble Intrest, as if they had not been able to raise Money for the publick Service at the times it was requisite.

But the number of these *Bankers* increased so fast, and the money at Interest come so much into their hands, that the King and His Farmers, and all Tallies of Anticipation and Orders, could not secure all the money they had to lend. Hereupon they sought out according to their several natural wits and capacities, how to dispose of money for more then

lawful

[6]

lawful Intrest, either upon Pawns or Bottom, Reason or unreasonable discounts of Intrest for Bills, or upon notorious usurious Contracts, or upon personal Securities from Heirs whose Estates are in expectancy, or by sudden advance of money to Projectors, who drawn into Projects many Responsible Men to the ruin of their Families;<sup>4</sup> these *Goldsmiths* however

Thurloe, V. 399, 400, 433, 434. But it seems more probable that it is a confused reference to the seizure of three Hamburg ships, "with near three hundred thousand Pound on Board in Silver, upon suspicion that it was the Property of the Dutch," noticed by Leake, 350, on the authority of Violet. This is perhaps the seizure referred to by Whitelocke, *Memorials*, 548, under date of November, 1652. Leake says that this money enabled Cromwell to dissolve the Long Parliament, and thus fixes the date.]

<sup>4</sup>[Anderson, after describing somewhat as above the methods in which the goldsmiths employed their deposits before the run upon them in 1667, says: "As there was a great Quantity of Cash in the Kingdom at that Time, this brief

getting 10l. or 15l. *per Centum*, and sometimes more, only for the present advance of the money, besides the future Intrest, These and a hundred other practices they have used and do still continue in contempt of Law and Justice, whereof they are so conscious to themselves, that most of them do once a year (at least) sue out their general Pardon to avoid the penalty of those wholsom Laws made to prevent such Frauds, Oppressions, contempt of Government, and mischieves to the Publick as they are daily guilty of : Tis also suspected that their original Trade of culling the heavy Money is not deserted by some of them ; also how come all clipt and washt money to pass so currant at their Shops, and so little appearance in payment of all the new coyned Money since the King's return, so many 100000ls. of the *Parliaments* Coin, besides *Bullion* imported having been new coyned, and how comes *Guinies* also to be bought and sold by them so much above the Coynage rate,<sup>5</sup> that upon their account only, and by their means, they pass currant in payments for more than they are really worth from some of their Shops ; I am sure some Merchants are supplied with Gold and Silver *English* Coyn, to transport upon the advantage of the exchange, or making their present Bargains in *France* and elsewhere, for importing Prohibited Goods.

SIR.

**I** HAVE given you my *Remarques upon the Rise and growth of these new kind of Goldsmiths, and I take them to have been in their highest Ascendant or State about the time that our Ships were burnt at Chatham by the Dutch :<sup>6</sup> that cold Storm*

Account may, in part, serve to answer a Query often made in our own Days ; viz., How were monied People able to dispose of their Superlucration-Cash before the modern public Funds existed ? ”]

<sup>5</sup>[A complete recoinage of the Commonwealth money was ordered by Charles II. in 1661, and the coinage of guineas in 1663. The guineas, ordered in the mint indenture to pass at 20s., “ immediately became current at a higher rate, by general consent, without any authority from Government.” Lord Liverpool, 78.]

<sup>6</sup>[June 12, 1667. Several passages in Pepys's *Diary* refer to the panic among the creditors of the London bankers, excited by this alarming event. Thus (June 13) “ W. Hewer hath been at the banker's, and hath got 500*l.* out of Backewell's hands of his own money ; but they are so called upon that they will be all broke, hundreds coming to them for money ! And their answer is, ‘ It is payable at twenty days : when the twenty days are out, we will pay you ’ ; and those that are not so, they make tell over their money, and make their bags false, on purpose to give cause to retell it, and so spend time. I cannot have my two hundred pieces of gold again for silver, all being bought up last night that were to be

*of the Peoples fears that their money was not safe in the Bankers hands blighted them, and since being in their declension, the Famous stop upon the Exchequer almost blasted their very root,<sup>7</sup> men being unwilling to trust money in their hands to lend his Majesty, so long as they hear the deplorable Cryes of the Widdow and the Fatherless, whose money they say at Feasts, they lent to the King, and cannot repay them, no not their Intrest to buy them Bread.*

Now

(7)

Now admitting that all the Creditors of the *Bankers* can no more think it safe that their money should be lent to the King, since Tallies, Orders, and the Great Seal it self, are found to be no security, I cannot imagine how Bread should be got by their trade of borrowing money upon lawful Intrest to lend upon unlawful to private persons, though they can silence their consciences and forget Christianity, and neither regard their neighbors welfare, nor the good of the whole Kingdom, but

had, and sold for 24 and 25s. a-piece." And (June 17) Captain Cocke says "that the bankers, he fears, are broke as to ready-money, though Viner had 100000*l.* by him when our trouble begun: that he and the Duke of Albemarle have received into their own hands, of Viner, the former 10000*l.*, and the latter 12000*l.*, in tallies or assignments, to secure what was in his hands of their's; and many other great men of our masters have done the like; which is no good sign, when they begin to fear the main." And see June 14 and 23. But (September 25) "I have not heard of one citizen of London broke in all this war, this plague, or this fire, and this coming of the enemy among us."]

<sup>7</sup> [January 2, 1672. For a summary account of the seizure of the bankers' cash in the exchequer, then used as "the bankers' bank," and of their efforts to obtain redress, see McLeod, *History and Practice of Banking*, chap. viii., or Lawson's *History of Banking*, 196. The infamy of advising this breach of the royal faith seems to be properly divided between Shaftesbury and Clifford; but Burnet, in his *History of his own Times*, supposing Shaftesbury to have been the adviser, adds the following: "He certainly knew of it before-hand, and took all his own money out of the Bankers' hands, and warned some of his friends to do the like." The amount seized was £1,328,526.

This seizure by Charles II. was a close imitation of the seizure of bullion in the mint by Charles I., in July, 1640, of which there is an account in Rushworth, *Historical Collections*, 1216. Anderson (ii. 68) thinks that the mint was used by the merchants as a bank in 1640, as the exchequer was after the Restoration. But Rushworth says that the bullion "was brought from beyond seas to be Coyned there," and that the seizure "gave a great alarm to the *Spanish* merchants and others, with which they were obliged forthwith to acquaint their correspondents and Partners beyond seas." And see also Ruding, *Annals of the Coinage*, i. 392. Anderson appears to have been misled by a remark of Sir William Temple, that "the Mint had the credit of a bank." The amount seized, according to Rushworth, was £120,000. There is an account of this affair with other citations in Gardiner, *History of England*, 1603-42, ix. 130. As to an arrangement for bringing in Spanish silver at this time, see a notice by Lord Liverpool, *Coins of the Realm*, 75.]

seek by Usurious unlawful Bargains, and oppressive Exactions from the needy and men in streights, and by hook and by crook to make the most of their Cash.

I dare take it for granted that the men now of that Trade are not men of greater natural Abilities nor acquired parts, than other Tradesmen of their age and degree, nor are they better instructed than others to imploy greater Stocks in an advantageous Trade, nor have they greater Stocks of their own to hazzard to remote places, from whence most profit may be hoped for; Neither have these men greater skill in Law than other Citizens, to judg of Securities to be taken for Money, nor have they more knowledg of Men to guess at the value of their Bonds; how then should they be able to make more Intrest of money than other Traders; yet the profit that may satisfy other Traders, cannot be sufficient for them to keep open their Shops: they must have a great dead stock of Cash to answer all Payments, and be always ready occasionally to advance great Summs: their Servants and Shops must be maintained for no use but Payments and Receipts, and deducting dead Stock and Charges, if they do not take nine *per Cent.* intrest for what they Lend and dispose of, they cannot make one of one, much less subsist. Besides there must be allowance for Charges to defend themselves against Informers for their usurious Contracts, and procuring frequent Pardons, and for hazard of loss of their Money lent upon usurious Intrest, every borrower having it in his power to plead their usury against them in lue of their Debts. All these things, and many more being duly considered, I suppose people will suddenly come to their wits, and begin to examine why a *Goldsmith-banker* should be better Security than another man, or fitter to be trusted for ten times more than he is worth: They give only personal Security, and many times their Notes for 500l. 1000l, or more,<sup>8</sup> when they

<sup>8</sup>[McLeod, *Theory and Practice of Banking* (third edition), i. 210, gives several examples of the goldsmiths' notes, still preserved by Child & Co., one of the oldest banking firms in London. "These early goldsmiths' or bankers' notes were not printed, but were just written on plain pieces of paper, like the promissory notes of private persons. The following is a specimen:—

"Nov. 28, 1684.

"I promise to pay unto the Rt. honble. ye Lord North and Grey, or bearer, ninety pounds at demand.

For Mr. Francis Child and myself,  
JNO. ROGERS."]

owe before they give that Note, twenty times the value of their own Estates, and yet these free Lenders will scarce be satisfied with two or three Mens Bonds for 1000l., that are known to be worth 5000l. a man; doubtless I say, People will think at last that a

[Banker]

(8)

*Banker* ought to give as good Security for money he borrows as another man, especially since he runs the greatest hazards in his disposing of Money for excessive Gain or intrest.<sup>9</sup>

I leave it then to your self to judg whether *Banking* be like to continue half your Son's Apprenticeship, and whether all the Arts that they can teach him can be worth one of the 200l. you design to give with him; I presume upon your Pardon for my plainness and tediousness; Yet I am prompted to say something more in point of Conscience, doubting whether it be Lawful to exercise any Trade in a constant avowed breach of the Laws of the Kingdom, as all *Bankers* do, these Laws being made for the good of the Society, to which the Scripture commands obedience for Conscience sake, *where they are met* [sic] *contrary to the Laws of God.*

Perhaps it is worth the inquiry upon that account, whether any man that hath exercised the Mystery of *Banking*, hath living or dying, gone off the Stage with a clear good Estate, all his Creditors being paid, fully paid. But I judg no Man. *I submit these thoughts and my Self to Your Prudent Censure, and remain,*

Sir,

Your Humble Servant

J. R.

FINIS.

<sup>9</sup> [Notwithstanding the great distrust expressed by the writer, it appears that the Little London Directory of 1677 names forty-four "goldsmiths keeping running cashes," the direct predecessors of the private bankers of the present day. Mr. F. G. H. Price, in his *Handbook of London Bankers*, vi., says that the following banking businesses are immediately descended from the goldsmiths there mentioned:—

Child & Co., from Blanchard & Child, at the sign of "Ye Marygold," Fleet Street;

Martin & Co., from Duncombe & Kent, at the "Grasshopper," Lombard Street;

Hoare & Co., from James Hore, at the "Golden Bottle," in Cheapside;

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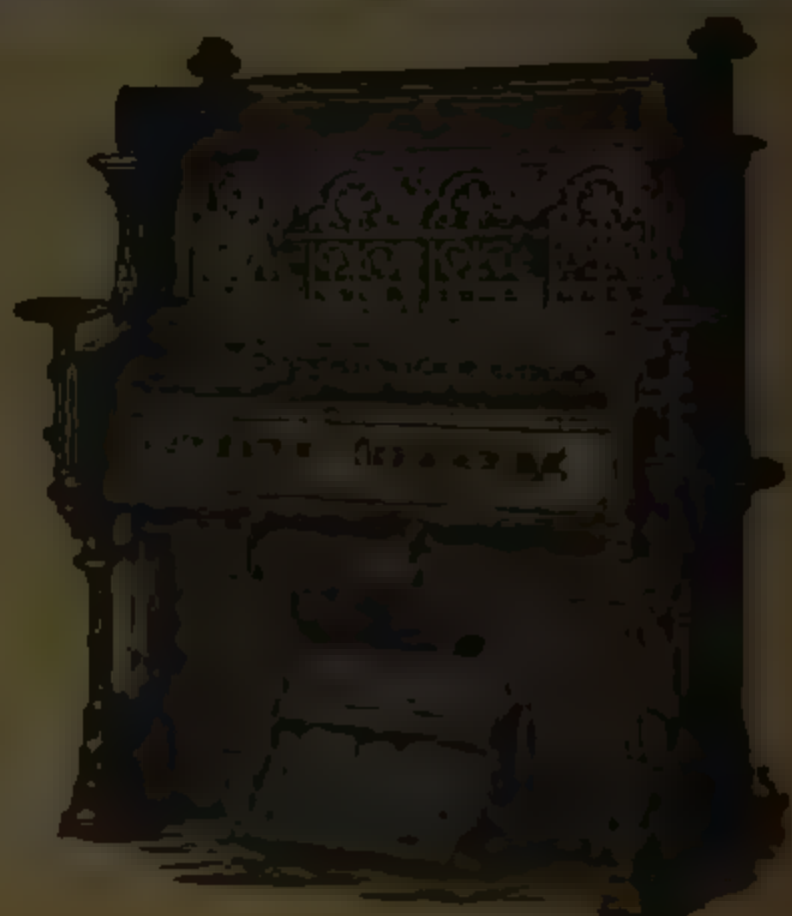
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APRIL, 1888

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A REPLY TO MR. MACVANE: ON THE SOURCE  
OF BUSINESS PROFITS.

WHEN the article "On the Source of Business Profits," in the *Quarterly Journal of Economics* for April, 1887, was preparing, the author believed that any one who might undertake to refute the views therein presented must join issue on one or two points only. It seemed to him that the question raised, as to the constituents of the employing class and the source of their profits, was a simple one, and that the discussion of the theory he proposed would necessarily be confined within a narrow range. In this opinion, it appears, he was mistaken; for Mr. Macvane has, in his article in the October number of this journal, arrayed against that theory a host of objections, all of which could not be replied to within any limits that could reasonably be allotted for that purpose, while to answer only those on which Mr. Macvane has placed most stress will necessarily require a heavy tax on the reader's patience.

If those objections can be arranged on any system whatever, they may perhaps be grouped under two general heads: first, objections to my theory derived from that view of the source of wages which is known as the doctrine of the wages fund; second, objections which Mr. Macvane brings directly against the views presented, in the April number, concerning the constitution of the employing class and the economic reasons for the very wide range existing among the members of that class as to the gains by them severally realized.

I. (a) Perhaps the most grievous thing to me, personally, is the imputation of having grossly misrepresented the wage-fund doctrine.\* That charge has been made before; but it has never been supported, so far as I am aware, by a single citation from the writings of any advocate of that doctrine, showing that he held it in any other sense, nor has the complaint been made by one of the persons supposed to be aggrieved. On the other hand, in my article in the *North American Review* for January, 1875, in which the natural and literary history of that doctrine was discussed at length, the statements of a half-score of its leading advocates were given in their own words. Moreover, of the only two of these writers by me known to be then surviving, one, Professor Perry of Williams College, frankly stated, in the preface to the next edition of his *Political Economy*, that his views on the subject had been changed by the arguments I had presented; the other, Professor Fawcett, failed, through all our oral or written communication down to the time of his death,

\*"I must say that, for my own part, I have never understood the wages-fund theory to assert or to imply any such absurdities. How anybody could have so read and interpreted any standard account of the circumstances determining the magnitude of the wages fund, and the rate of wages resulting from it, is to me incomprehensible." Mr. Macvane, *Quarterly Journal of Economics*, October, 1887, p. 24.

"Of course, no sane person would deny — I think no sane person ever has denied — that there is a relation between the rate of wages and the productiveness of labor." *Id.*, p. 16.

ever to express the slightest sense of injustice done him. It is possible that, in charging misrepresentation of the wage-fund doctrine, Mr. Macvane has in view the statements of that doctrine made after it had been attacked by Longe, Thornton, and others, between 1866 and 1876; but I must decline to accept these patched and revamped statements as giving any true expression of the wage-fund doctrine, as it should be known in economic controversy and economic history. For more than forty years that doctrine held complete sway over English political economy. It was stated and restated with the utmost precision and with entire unanimity by the economists of that generation, and the wage-fund was freely referred to, in discussion, as an ultimate fact. It is this doctrine, so stated,\* that is properly referred to as the wage-fund doctrine; and those of us who have attacked it, or who may now, since its general abandonment, have occasion to refer to it historically, are not bound to qualify our expressions by any reference to statements made of it, after it had been challenged and criticised, by writers who sought to recast it, surrendering, because they must, almost the entire ground to its assailants, and, as Professor Marshall has said in the first number of this journal for the current year, depriving it of all significance and all consequence.

(b) In attempting to rehabilitate the wage fund, Mr.

\* "There is supposed to be, at any given instant, a sum of wealth, which is *unconditionally* devoted to the payment of wages of labor. This sum is not regarded as unalterable, for it is augmented by saving, and increases with the progress of wealth; but it is reasoned upon as, at any given moment, a predetermined amount. *More than that amount it is assumed that the wages receiving class cannot possibly divide among them; that amount, and no less, they cannot but obtain. So that, the sum to be divided being fixed, the wages of each depend solely upon the divisor, the number of participants.*" John Stuart Mill, *Fortnightly Review*, 1869.

Mr. Macvane declares (page 23-4) that no economist ever taught the doctrine that, "if the laborer does not seek his interest, his interest will seek him and will find him." Is not this distinctly asserted in Mr. Mill's statement above,— "that amount, and no less, they cannot but obtain"?

Macvane finds it essential to destroy the theory, which during the last ten and twenty years has obtained a constantly increasing acceptance, that wages are, in a philosophical sense, paid out of the product of industry. At times, he writes as if he understood the advocates of this view to hold that wages are actually so paid, the laborers awaiting the harvesting of the crops or the marketing of the goods, in order to receive the remuneration of their exertions. While he admits that, in some instances, this is the case, he thinks that the proportion of such instances is small.\* Now, so far as the theory he combats is concerned, it does not matter whether the proportion of such instances be larger or smaller. So far as the theory he advocates is concerned, however, any proportion whatever of such instances is absolutely fatal,† since it is of the essence of the wage-fund doctrine that wages are paid always and wholly out of capital, the saved and accumulated results of precedent industry.

But, in fact, is the proportion of such instances as small as Mr. Macvane seeks to show? Let us take a few classes of cases. The railroads of the United States receive annually two hundred and ten millions of dollars for transporting passengers. These receipts come in day by day, yet the railroad company habitually pays its employees at the close of the week or at the close of the month. Here we have a very large class of services where the employer receives the price of his product before he pays for the labor concerned in its production. The railroads of the United States also receive annually for freights five hundred and fifty millions. The greater portion of

\* "On the whole, I cannot help feeling that Mr. Walker takes a very imperfect view of the extent to which current wages at any moment are the product of previous labor." Mr. Macvane, p. 31. "Wages are, with slight exceptions, paid before production is completed." *Id.*, p. 21. "Civilized labor does not yield immediately a product good for human use." *Id.*, p. 27.

† "La théorie exclusive du fonds des salaires ne pouvait tenir en présence de tels faits." M. Levasseur, *Journal des Économistes*, January, 1888.

this amount is collected before the train hands, the track hands, and the station hands have received the remuneration for their share of the service. In a still higher degree is it true that express companies receive the price of their service prior to the payment of their employees. The United States government, again, collects its postal revenues day by day, yet postpones the payment of its clerks and carriers to the end of the month. To descend to the other end of the scale of dignity, hotel-keepers and, in a less degree, boarding-house keepers collect their bills before they pay their cooks, chambermaids, and scullions. Nearly all the receipts of theatre, opera, and concert companies are obtained day by day, although their staffs and troupes are borne on monthly or weekly pay-rolls.

It is not necessary longer to pursue this subject, since, as was said, it does not matter, so far as the theory of wages which Mr. Macvane combats is concerned, how large or how small is the proportion of instances in which the employer sells his goods or his services before paying for the labor engaged in their production.

(c) In regard to that part, let us say at once, by far the greater part, of the aggregate volume of wages, which is paid before the employer has housed his crops or marketed his goods, Mr. Macvane finds something absurd in the proposition that these wages are, indeed, advanced out of capital, but are, in economic theory, paid out of product: —

I have endeavored to get a clear idea of Mr. Walker's precise view on this point, but without entire success. At times, he seems to admit that wages are in the nature of an advance to the laborers; at times, he seems to throw a doubt on the reality of the advance. In one breath, he says, "Wages are, to a very considerable degree in all communities, *advanced* out of capital, and this from the very necessity of the case"; in the next breath, he tells us that "wages are, in a philosophical view of the subject, paid out of the product of present industry." He heads a chapter with the statement that "The Wages of the Laborer are paid out of the Product of his Indus-

try," and yet, in the course of the chapter, states that, "in those countries which have accumulated large stores of wealth, wages are in fact very generally, if not universally, advanced" to the laborers. While his statements are thus somewhat wavering, etc. (p. 30.)

From the above, a reader could but gather that the "wavering" statements of the work cited were due to inadvertent self-contradiction: whereas, the two statements, that wages may be and often are advanced out of capital, but are, in a philosophical view, paid out of product, are purposely made parts of the same sentence. It is not in two breaths, but in one, that these statements are uttered; and the two together constitute, as I esteem it, a perfectly self-consistent theory of the origin and measure of wages. Whether that theory is consistent with the facts of industrial society will be considered further on. Assuming, for the moment, that wages are, in the economic sense, paid out of product, what is there illogical or absurd in the statement that they are, nevertheless, often, and indeed generally, advanced out of capital? When Mr. Irving gives a series of theatrical entertainments, he doubtless pays, in advance,\* out of the profits of previous professional service, a considerable proportion of the necessary expenses. Is there in this aught inconsistent with the statement that, from the manager's point of view, those expenses are chargeable to the entertainments themselves, and are, philosophically considered, paid out of the receipts? When a manufacturer undertakes the production of a body of goods, or a farmer the raising of a crop, a portion, larger or smaller, of the expenses, including the whole or a part, as the case may be, of the wages of the laborers employed, is paid out of previous accumulations. Is there anything in this inconsistent with the statement

\* Of course, the employer or manager should have, and generally, though not always, does have, enough to insure the payment of the wages promised, against a possible falling off in the anticipated receipts. This has been abundantly covered in all my statements.

that, from the employer's point of view, those expenses are properly chargeable to the product, and are, in the economic sense, paid out of the proceeds?

(*d*) Coming now to the main question, What is the source, and wherein is found the limit, of wages possibly to be paid? Mr. Macvane strenuously asserts, according to the old wage-fund doctrine, that wages are paid out of capital; but he adduces no consideration which seems to me in the slightest degree to affect the validity of the argument by which the proposition that wages are, in a philosophical sense, paid out of the product, has been established to the general acceptance of living economists.

The difference is just this: the advocates of the wage-fund doctrine assert that the sufficient reason for the payment of wages is found in the existence of capital; and that it is the amount of that capital, thus pre-existing, which determines absolutely the amount of wages which can be and will be paid in any given situation. Those of us who oppose the wage-fund doctrine maintain that, while the pre-existence of capital is an important and, indeed, essential condition of production, the only sufficient reason for the employment of labor is found in the motives which lead to production; and that it is the anticipated value of the product, under the given efficiency of land, labor, and capital, in the situation existing, which determines the amount of wages which can be and will be paid. The advocate of the wage-fund doctrine holds that only one of the three factors of production, viz., capital, has to do with the problem of wages. We hold that all three factors enter into that problem. The wage-fund advocate virtually declares that the possessor of capital is under an economic necessity to employ labor. We hold that the mere fact that a man is the possessor of capital no more constitutes a reason why he should pay wages than the fact that another man has legs and arms constitutes a reason why he should work when he can get no wages. We hold that those who own or control capital

pay wages, not that they may disburse a fund of which they are in possession, but that they may purchase labor; that they purchase labor, not that they may keep the laborers employed, but that they may produce wealth by means of that labor; that, therefore, it is the expectation of the product, and not the possession of capital, which constitutes the motive for the payment of wages; and that it is the anticipated value of that product, and not the amount of capital they have at command, which determines the amount they can afford to pay in wages, in addition to necessary payments on account of interest and rent.

(e) But, aside from the direct argument in favor of his proposition that wages are paid out of and limited by capital, Mr. Macvane thinks he finds an insuperable objection to the view that wages are, economically speaking, paid out of the product, in what he regards as the financial impossibility of anticipating, for such a purpose, the avails of production. How, he asks, can wages be paid out of the product when the product is not in existence, at least in marketable shape, when the wages are actually paid? Even on the assumption that the efficiency of labor were at once increased to an extent which would, economically, justify an addition of fifteen per cent. to their wages, he declares that increased wages could not possibly be paid, because the commodities necessary for paying the increase would not yet have been produced. (p. 27.) He declares that such an anticipation of the avails of production would be "a miracle." (p. 26.) "The wages of the present," he says, "must still depend on the present resources for paying wages." (pp. 17, 18.) In the very spirit of the old wage-fund doctrine, he declares that an increase of production resulting from an enhanced efficiency of labor must, of necessity,\* first go, entire, as extra profits to the

\* "These influences can act on wages only by first acting on savings." (p. 17.) "The increase of product goes, in the first instance, by the very nature of the case, to swell the revenues of those who employ laborers." (p. 25.)

employer or as extra interest to the capitalist; and that it is only as these may afterwards decide to employ their greater wealth in the purchase of more labor that wages can be enhanced.

Now, manifestly, this objection does not lie at all against an increase of wages due to an enhanced productiveness in those classes of cases where the employer realizes the avails of the service before he is expected to pay the wages of his own employees. But, really, does this objection apply to any class of cases? I think I have shown in *The Wages Question*, both by reason and by abundant instances, that it does not. The fact is, Mr. Macvane's whole reasoning on this subject unconsciously embodies an *équivoque*. It is true that, in a certain industrial and financial situation, the body of employers might not be able to pay—that is, to pay down—more than a certain amount in wages. But it does not follow that they might not engage to pay more, possibly much more, in wages, if their expectations of the product should be such as to justify increased expenditure on this account. Now, it is precisely in that way that we perform Mr. Macvane's "miracle." Introduce the element of credit between the employer and the laborer, and, presto, change! that which was declared to be physically impossible becomes an accomplished fact. The miracle is wrought. The employer *engages to pay* such wages as the anticipated value of the product will justify. He *pays down* as much as his means will allow or as the necessities of the laborers require.\* He *pays the balance* of wages out of the harvested crop or marketed goods.

\* "There is nothing in the need that the laborer has of provisional maintenance which defeats his claim to a payment, over and above the mere cost of subsistence, out of the product when completed. It may be that poor Piers must depend daily, pending harvest, upon the Squire for bread, out of the crop of last year; but that constitutes no reason why Piers should not receive some sheaves, at harvest, as his own." F. A. Walker, "The Wage Fund," *North American Review*, January, 1875.

The arrangement which has been described is that upon which the payment of wages largely rests in all communities of comparatively limited capital. Perhaps I may be permitted to quote somewhat at length from my work — *The Wages Question* — upon this point: —

In new countries, by which we mean those to which men have gone with the industrial ideas and ambitions of older countries, but with an amount of capital which, from the necessity of the case, is more or less inadequate to the undertakings for which their skill and labor qualify them, wages are only partially paid out of capital. The history of our own country so amply illustrates this statement that we need not go elsewhere for examples. From the first settlement of the colonies down to the discovery of gold in California, laborers, whether in agriculture or in manufactures, were, as a rule, hired by the year, to be paid at the end of the year. Bare subsistence might be furnished by the employer meanwhile, small amounts of money might be advanced "for accommodation," the laborer's tax bill or doctor's bill might be settled by the employer; but these payments were not to such an extent (except in case of protracted sickness or sudden misfortune) but that the employer was always in debt to his laborer.

I have before me a considerable collection of accounts taken from the books of farmers in different sections as late as 1851. These show the hands charged with advances of the most miscellaneous character. . . . In general, the amount of such advances does not exceed one-third, and it rarely reaches one-half of the stipulated wages of the year. It is idle to speak of wages thus paid as coming out of capital. At the time these contracts were made, the wealth which was to pay these wages was not in existence. It came into existence only as the result of those contracts and the rendering of those services.

Not less distinctly did this system of paying wages prevail in the department of manufacturing industry during the same period. Extensive inquiries have satisfied me that manufacturers in New England did not generally leave off paying their workmen by the year until after 1854 or 1855. . . . Such an arrangement was the very condition on which alone industry could be prosecuted, on which alone employment could be given. Capital was scarce, because the country was comparatively new; and, if wages had been measured by capital, wages must have been low. But at the same time production was large, because natural agents were copious and efficient, and labor

was intelligent and skilful; and as it is production, not capital, which affords the measure of wages, wages were high, but the workmen had to wait for them till the crop was harvested or the goods sold. And this they gladly did, and never for one instant suspected that they were being paid out of capital; indeed, they knew better, for they had seen growing under their hands that in which they were finally paid. . . .

But whether wages are advanced out of capital in whole, or in part, or not at all, it still remains true that it is the product to which the employer looks to ascertain the amount which he can afford to pay. When the employer shall pay is a financial question. What he shall pay is the true industrial question with which we have to do in treating wages. This is determined by the efficiency of labor under the conditions existing at the time and place. (pp. 135-137.)

II. (f) The objections which Mr. Macvane brings directly against my theory of the Source of Business Profits are not easily classified, and I see very little preference for one order of dealing with them as compared with any other. Perhaps the objection which it may be well to dispose of first is that which Mr. Macvane educes from the practical inconvenience to political economists which would be attendant on the acceptance of a second descending scale of productiveness. Mr. Macvane says:

We should have, according to this new doctrine, two descending scales of productiveness, one due to differences in the natural agents, the other due to the varying capacity of employers. Both of these (the foot of the scale in each case) are supposed to be operative in determining the price. The cost of production of that part of the supply which is produced at the greatest disadvantage settles the price of the whole. But what part, on this theory, is produced at the greatest disadvantage? Unless, by happy chance, the lower end of the one scale coincides with the lower end of the other, unless the least efficient employers have the least productive lands, we lose our regulator of price and our base for reckoning rent. If the least efficient employers should happen to have farms and mines somewhat above the poorest, the consequences would be extremely awkward. The poverty of the poorest lands might be counterbalanced, to an indefinite extent, by the superior business capacity of those tilling

them; and the inferior business capacity of the least capable farmers would be offset by the natural advantages of their land. If each of these is to operate in fixing the price, how are they to combine their effects? The produce that comes under the influence of the one escapes the effects of the other. Where shall we look, on this theory, for "that portion of the supply which is produced under the greatest disadvantage"? (pp. 4, 5.)

Now, this practical objection actually exists; and, if the convenience of political economists, merely, had been consulted in the formation of the soil and the constitution of human society, one descending scale of productiveness, only, would have been allowed. Indeed, we may further say, if the convenience of political economists alone had been consulted, mankind would have been created strictly according to the pattern of that economic man whose actions the writers of the Ricardian school delight to describe; and all those annoying "sympathies, apathies, and antipathies," which perplex the student of wealth, would have been entirely eliminated from society.

The question, however, is not whether the existence of "two descending scales of productiveness" suits the convenience of economic reasoning, but rather whether two such scales, in fact, coexist; and Mr. Macvane's highly humorous description of the embarrassments of political economists on this account cannot be taken as constituting even a *prima-facie* objection to the theory of business profits which he combats, unless he is able to adduce at least one department of human activity within which two (or more) descending scales do not coexist. I have been able to think of none. If we speak of war, we have good generals with good armies and good generals with bad armies, bad generals with good armies (sometimes, by the accidents of succession) and bad generals with bad armies. Moreover, some of the good armies and some of the bad armies may have good weapons, and some of the good armies and some of the bad armies may have bad

weapons. Of course, this makes it terribly confusing to the military critic, who naturally wishes that all generals had been good (or bad), that all armies had been good (or bad), and that all weapons had been good (or bad), in order that his "science" might be as simple as possible and susceptible of purely mathematical treatment throughout. But the convenience of military critics has been as little consulted as that of economists in the constitution of the world; and those who will write of war are therefore sometimes obliged to weigh a good army under a bad commander, but with good weapons, against a bad army under a good commander, but with bad weapons,—and so on through all the permutations of which the given elements are susceptible.

If we speak of sport, we find fishermen, who may themselves be good, indifferent, or bad, using fishing rods and lines and hooks and flies which may be either good, indifferent, or bad; and the writer on angling may be confronted with the delicate problem whether an indifferent fisherman with good tackle will catch more trout in a day than a good fisherman with indifferent tackle. When we add that the streams on which a number of fishermen are engaged may, in turn, be either good, indifferent, or bad, the problem, it will be seen, becomes one of great difficulty. It would be easy to show that the same complexity exists in industry which has been shown to exist in war and in sport. But it is, probably, not necessary to pursue the matter further, until Mr. Macvane has cited one instance, among all the forms of human activity, where two, or more, "descending scales of productiveness" do not coexist.

(g) As to the special case of the cultivation of the soil, which Mr. Macvane brings forward,\* as showing the

\* In discussing the law of rent in his general treatise, he [Mr. Walker] dwells only on differences of soil and situation, as causing one farmer to have larger returns than another. Incidentally, indeed, in connection with another

absolutely destructive effects upon systematic political economy which would be produced by the recognition of two descending scales of productiveness, I think there will be no difficulty in showing the entire compatibility of my theory of the Source of Business Profits with the accepted economic doctrine of rent. That this point was not dwelt upon in the April article, as Mr. Macvane complains, was due to the fact that I was there, primarily, writing on profits, and not on rent; and gave my readers credit for the intelligence required to qualify, for themselves, the familiar statement of the law of rent, to correspond to any deviation from the assumption which underlies that law. What is that assumption? Why, that the several tracts of land taken for the purposes of the discussion are treated with "equal applications of labor and capital." This assumption is expressed in all statements of the Ricardian doctrine of rent, usually in the very words given above. Now, the phrase, "equal applications of labor and capital" fairly implies both that the amounts of labor and capital applied to the several tracts shall be equal and that these amounts shall be equally well applied,—applied, *i.e.*, with the same intelligence, energy, economy, and skill in each and every case.

Since, however, Mr. Macvane expresses a desire to have it formally shown how the accepted theory of rent can be made to work in conjunction with the newly offered theory of profits, the following illustration may be given:

subject, he makes a remark, which, if taken literally, can only mean that, in his theory, all farmers are to be regarded as of the same grade of ability, and all of the "no-profits" class! Comparing the special gains of the successful business man with the rent of land, he says,—"just as the cultivator of soils of the better class has a surplus left in his hands after paying wages for labor and interest for capital employed, which surplus, called rent, goes to the owner of the soil." If it is assumed that the whole surplus above wages paid for labor and interest for capital goes to the landlord, of course that would obviate the difficulties I have mentioned: all farmers are then of the "no-profits" grade. But, if that be assumed, what shall we say of the assumption? (pp. 5, 6.)

Let it be supposed that all the land cultivated for the supply of a certain market is divided into three tracts, which would, under the application of equal amounts of labor and capital, all well, and equally well, administered, yield, severally, sixty, forty, and twenty bushels of Indian corn. According to the Ricardian formula, the rent of the best land will then be forty bushels; the rent of the second grade will be twenty bushels; the third tract will bring no rent, the crop simply repaying the cost of cultivation. Now, let it be further supposed that, instead of equal intelligence, energy, economy, and skill directing the application of labor and capital to the land in this community, the cultivators of each grade of soil are themselves of three different grades of efficiency, those of the lowest grade not being capable of deriving from the soil, through the application of the given amounts of labor and capital, so much by two bushels as do the producers of the highest grade, while the cultivators of the intermediate grade fall short of the best result by one bushel. It is clear that there would then be required a readjustment of the scale of rents, according to the new elements introduced into the problem. The actual produce of the three grades of soil would be, under the hands of the three grades of cultivators, as follows: —

	First-grade cultivation.	Second-grade cultivation.	Third-grade cultivation.
First-grade soils, . . . . .	60	59	58
Second-grade soils, . . . . .	40	39	38
Third-grade soils, . . . . .	20	19	18

What, then, has been the effect of the introduction of cultivators of lower industrial grades, in the case just now given? It has been practically equivalent to lowering the limit of cultivation to lands producing, under the given application of labor and capital, no longer twenty, but only eighteen bushels per acre, with all which such a lowering of the limit of cultivation implies.

(h) The point which we have now reached is that which,

perhaps, is most convenient for dealing with the argument that the occupation of the soil or the control of the agencies of transportation, trade, and manufacture by incompetent employers is powerless to enhance the price of products or to diminish the remuneration of labor.

Why not also caution the community against allowing the poorer grades of land to be cultivated? There would seem, on his [Mr. Walker's] theory, to be as good reason for the caution in the one case as in the other. If the least competent employers regulate prices, then prices would be made higher and not lower by driving them out of business, just as the price of food would be made higher and not lower by punishing men for cultivating poor grades of land. Mr. Walker is thoroughly aware that it is not open to anybody to force up the price of food and the rent of land by needlessly bringing into cultivation land poorer than any hitherto in use. Why should he argue as if the corresponding feat were possible, when incompetent employers "force themselves into the control of business and maintain themselves there at the expense of the community"? (pp. 7, 8.)

It is true that, if, in the community taken above for the foregoing illustration (*g*), one incompetent cultivator, or twenty or a hundred, were to move out upon land producing, with the given application of labor and capital, only ten bushels to the acre, their doing so would have no effect upon the price of corn. They would simply starve themselves; and the price of corn would remain unchanged, because, as we assumed, the whole required supply of the community can be produced upon the sixty, the forty, and the twenty bushel tracts, taken together. But we saw above that, if incompetent cultivators come into possession of the better tracts, they do so to the injury, not of themselves only, but also of the community. What Mr. Macvane, in effect, says is that the control, by incompetent persons, of productive machinery which is *not* required for the supply of the community can have no effect upon the price of produce. This is true enough, but has no relevancy to the question. What I referred to

was the possession and control, by incompetent persons, of a portion of the productive machinery which is required for the supply of the community.

(i) But Mr. Macvane (page 6) brings still another objection to the view that the control of business by incompetent employers is at the cost of the community, and is, therefore, something to be deprecated. He admits, in the case of agriculture, that, "as poorer sources of supply have to be resorted to, in the industries subject to the law of diminishing returns, the value of the product rises." But, he argues, "this is because, and only because, other industries are free from the law of diminishing returns. If all industries were subject to that law, neither value nor price would be affected by it." Now, Mr. Macvane continues, "the differing efficiency of employers is a fact common to all industries, and, by Mr. Walker's own assumption, tapers off to the same precise vanishing point of 'no-profits' in all. How then, I ask, shall it affect the value or the price of any commodity? If the presence of the 'no profits' employer tends to raise the value of any one product, it must have a precisely similar effect on the value of every other product." That is, since the range of efficiency in the employing class affects all industries, and presumably affects them all alike, it is as if it affected none. This cause can have no possible influence upon value.\* Thus does Mr. Macvane dispose of the "no-profits" employer as the regulator of prices; and he adds,

\* As if to shut me off from the last possible avenue of escape, Mr. Macvane adds, "Neither can it affect prices (i.e., the exchanging proportions of gold and other things), since in the production of gold the 'no-profits' employer is present, and must be as potent in affecting the value of the product as he is in every other case." (pp. 6, 7.) Mr. Macvane here falls into a familiar error, in the theory of money, by assuming that the present cost of production of gold necessarily governs the "exchanging proportions of gold and other things." It does not do this necessarily; it does not do this habitually; it seldom does this. It is fairly a question whether, in the history of the world, it has ever done this. For hundreds of years after the downfall of the Western Empire, gold and silver continued to purchase only a small fraction of the labor or commodities which would then have been required to produce gold or silver, in any considerable quantities. For generations after the dis-

"Probably Mr. Walker would admit that his proposition as to the source of the earnings of successful business men must stand or fall with his theory as to the price-regulating function of the 'no-profits' business man." (p. 8.)

This is one of the stinging points which abound in the October article, and which produce the impression upon the mind of the casual reader that Mr. Macvane has exposed a grave blunder. The fact is there is not the slightest validity in the objection. Mr. Macvane's argument is, to use an Hibernicism, built upon an hiatus. It is true that the prices of the products of all industries cannot (the volume of the currency remaining unaltered) rise simultaneously, *provided the same quantities are concerned*. With a diminution, however, in the amounts of the several commodities in the market, there is no reason why each commodity should not bear a higher price. On the contrary, prices must rise.

Now, the introduction of employers of less than full efficiency does, by the very statement of the case, diminish the amounts of the products resulting from the application of labor and capital.

(j) Still further pursuing his objection to my proposition, that the earnings of the successful men of business stand in a necessary relation to the cost of production of that portion of the required supply which is produced at the greatest disadvantage (embracing, in the latter conception, the effects of incompetent direction), Mr. Macvane, leaving the lower end of the scale of management and proceeding to the upper end of that scale, asserts, as something indisputably true, that, "if a good manager can create as much wealth as one hundred men when good managers are few, he can do the same when good managers are numerous." (p. 9.)

covery of the silver mines of Mexico and Peru, silver retained a purchasing power largely in excess of the cost at which silver was then being produced in vast amounts. It was many years after the simultaneous discovery of gold in California and Australia before gold fell to near its own cost of production.

We have here another slip over the distinction between utilities and values. It is true that the energy, intelligence, economy, and skill of an able manufacturer would be not less efficient in creating utilities, were all other employers equally competent with himself; but what *values* should reside in those utilities would depend upon the supply. And, inasmuch as the supply could not fail to be increased by the more general introduction of energy, intelligence, economy, and skill into business, it would seem that the amount of wealth,—i.e., values, not utilities—resulting from the efforts of the first-indicated employer would necessarily be reduced.

The objections with which we have thus far dealt may be considered rather as objections to the consideration of my theory of business profits than as objections to the theory itself. I regret that the extended space which has been necessarily occupied in replying to these criticisms, most of which should not have been made at all, has left little room for the discussion of those parts of Mr. Macvane's article which stand properly related to the theory in question.

(k) Referring to the hypothetical case with which the article in the April number opened, of a small and exclusive class of business managers, "each the precise economic equivalent of every other," Mr. Macvane (page 16) says that I have "no suggestion to offer as to the amount of their earnings apart from the needless and highly uneconomic assumption of a combination to fix 'a standard for their own remuneration.'" To this characterization it is enough to reply that no writer can make a full and conclusive exposition of the law of rent without stating the hypothetical case of a limited extent of lands, all of equal quality, under private ownership, and possibly subject to

a combination to fix the price of the produce. Inasmuch as my argument closely assimilated profits to rent, the assumption referred to was neither needless nor uneconomic.

(*l*) Mr. Macvane declares (page 10) that my theory is, "in reality, not a theory of manager's earnings\* at all, but a theory of the differences of managers' earnings." It is true that the theory in question treats of differences of profits. But it is also true that, by that theory, differences of profits make up the whole sum of profits; and, therefore, to treat of "differences of managers' earnings" is to treat of "manager's earnings" themselves, just as to explain differences of rents is to account for the whole of rent. By the theory in question, the earnings of managers of the lowest industrial grade, being not in excess of wages,—that is, not in excess of what the same persons might reasonably look to obtain, if employed by others,—are treated as not profits at all, being on the same scale (making allowance for friction on coming into or going out of business) and governed by the same law as wages. It is of course legitimate to take exception to the propriety of this definition; but, clearly, if we start with this definition, as was done in the April number, any theory which accounts for all the differences of managers' earnings, above this "no-profits" line, accounts for all the profits there are, and is therefore a full and proper theory of profits.

(*m*) Over and over again, in the course of his article, Mr. Macvane exhibits a misconception of the remark of Professor Marshall, quoted and adopted by myself, to the effect that a manager's earnings represent his own creation of wealth. That remark had reference, as was abundantly shown by the context, to the existing industrial situation, where employers of various industrial grades

\* Again, "Mr. Walker treats rather of differences of profits than of profits as such." (p. 9.)

are engaged in production.\* Yet Mr. Macvane insists upon holding Professor Marshall and myself responsible for the correctness of this statement in application to an unreal industrial situation, where all employers should be of the same industrial grade,—a situation with respect to which neither Professor Marshall nor myself would think of making such a statement.

(n) Taking up “the residue theory of wages” advanced in the April article, Mr. Macvane says: “When the whole work is done, it seems to me to be little more than a somewhat elaborate statement of the fact that what does not go to the other participants goes to the laborers. By simply transposing terms, the same method would yield an equally valid law of rent, or of interest, or of earnings of management.” (p. 14.) These sentences repeat the objection which was uttered by others, in reviews and in private correspondence, when this theory of the source of business profits was brought out in my *Political Economy* in 1883. Why, these persons asked, is wages the residual share of the product, any more than rent, interest, or profits? If it be true that wages is what is left of the product after those three shares have been taken out, why is it not equally true that rent or interest or profits is what is left after deduction is made of the other three shares in each successive case? I confess the persistency with which this question is asked has been very discouraging, but let me try once more to show what is meant by the term “residual” in this connection.

What we are inquiring about is the distribution of the product of industry. Now, at any given time, the volume of articles having utility to men and yet requiring the exertions and sacrifices of economic agents is divided,

\* “This surplus, in the case of any employer, represents that which he is able to produce over and above what an employer of the lowest industrial grade can produce with equal amounts of labor and capital.” — *Quarterly Journal of Economics*, April, 1887.

speaking broadly, into four great shares,—interest, rent, wages, profits; and a person contemplating the industrial situation, without going below the surface to find the forces which had determined the division of that product, might say of each share in turn that it equals the product minus the three other shares. But it is always possible that the volume of what we call wealth, produced annually or within a stated period, may be increased. Indeed, we have to contemplate the probability that (1) through the discovery of larger resources in nature, or (2) through the introduction of new arts,\* or (3) through the industrial improvement of the laboring class, the volume of wealth will always be on the increase, though at varying rates. Now, whatever may have been said of the previous division of the product, it is clear that, equilibrium having been destroyed by change of conditions, the reapportionment of the product must be effected by *forces*, economic in their character. If, then, it can be shown that, in the distribution of the new product, three of the shares are naturally limited, so that not one of them need increase or, under perfect competition, will increase merely because the product has increased, we are entitled to call the remaining share, which receives the whole gain, residual. It is still true that each claimant in turn will receive what the others do not; but this is only a shallow and unphilosophical way of regarding the matter. In the fact that one of the parties to distribution has the power to engross the entire increase is found a sufficient reason for distinguishing that share by some term which will express that peculiar virtue. Now, in the April article, it was, I think, abundantly shown that, in a great variety of cases, the product of industry might, through a great variety of causes, be largely increased, (1) without making any

\* The following discussion assumes that these new arts are not protected by patents or other forms of monopoly. So far as monopoly enters, competition fails; and the increased value of the product will, in whole or in part, go to the inventor, so long as the patent continues in force.

heavier draft upon the soil, and thus without enhancing rent; (2) without requiring the use of additional capital, and thus without enhancing interest; (3) without introducing a lower grade of employers, and thus without enhancing profits. What has been said about rent is fully borne out by the accepted economic doctrine. It was the object of the article in question to show that the same was equally true of profits. As to my treatment of the share of the product going to the capital as interest, Mr. Macvane makes a complaint, which will next be noticed.

(o) It is, he says, "no unfair criticism of Mr. Walker's theory at this point to say that it takes the rate of interest for granted." \* (p. 13.) In one sense, this is hardly correct, since it was stated in the April article that the amount going to capital, as interest, is determined "by the relation of supply and demand," — a formula which the economists of Mr. Macvane's school have deemed sufficient to account for anything and everything in the economic world. But it is true that no original determination of interest, as a share of the product, was attempted. The formula quoted was considered adequate for the purposes of that discussion. All that was there required — in the progress of the argument as to the residual character of wages — was to show that interest, as a share of the product of industry, is fixed and limited by a competent cause, and would, therefore, not be enhanced merely because of an increase of the product, an enlarged demand for capital not being, as we have seen, necessarily involved in such an increase.

Since, however, Mr. Macvane insists upon regarding the failure to discuss the question of interest as constituting an hiatus in my argument, I would say that the rate of interest is determined by the supply of and the demand for capital, taken in conjunction with the principle of Final

\* In contradistinction, he says of the authors of the *Economics of Industry*, "They do not take the rate of interest for granted." (p. 19.)

Utility, as stated by Professor Jevons. When we speak of the demand for capital, we mean, broadly, the occasions for its productive uses,—not literally, since those occasions may be misconceived, and real opportunities for the profitable application of capital may exist without giving rise to an actual demand. But, broadly speaking, that demand is determined by those occasions. Now, while the rate \* of interest is, say, at five per cent., men will be borrowing at that rate who could better afford to pay ten per cent. than not to have the use of capital. There will be other men who could better afford to pay nine per cent. or eight or seven or six than not to have the capital; but these, nevertheless, borrow at five. Why? Because the supply of capital is so large that the demand for it, coming from all those who could afford to pay ten per cent. or nine or eight or seven or six, or even five and a half, is not sufficient to take it wholly up; and it is only as we come down to those who can pay five per cent., and get the amount so paid back again in the price of their product, but could not, or think they could not, pay more and make themselves “good,” that we attain that total demand for capital which, in the situation given, is necessary to take up the supply. Notwithstanding that the utility of the successive increments of capital applied to production has varied within a wide range, all the loans made would, in a money market where perfect competi-

\* Mr. Sidney Webb, in his article on the “Rate of Interest and the Laws of Distribution,” in the *Quarterly Journal of Economics*, January, 1888, rightly says that this term is often erroneously used, or used with the result of producing misconception, being understood to apply to the current rate paid on loans in the “money market,” or to the current rate paid on more permanent loans on security, or to the normal rate to which the variations in current rates of loan interest tend to conform, through a long period, for any community. Not the less is the term Rate of Interest one proper to be applied to what Mr. Webb designates (p. 192-3) as Economic Interest. If there be a body of capital applied to production, and if a portion of the product becomes the remuneration, or reward, for the use of that capital, there must be a ratio between the two quantities, which may, properly enough, be called the Rate of Interest.

tion \* existed, be made at the same rate,—the rate, namely, which the last borrower can afford to pay.

It is at this point that I am compelled to part company with Mr. Webb, who, in his article in the last number of this journal, announces the principle that it is “inequality of return which is the cause alike of rent, interest, and rent of ability” (p. 193), and whose analysis of the practical distribution of capital among the several industries and among the individuals of each industry leads him to disregard that “trifle of interest” which would theoretically be the remuneration for the “minimum of capital” of “the worker using the minimum of skill and capital, engaged in wealth production under the most unfavorable circumstances.” (p. 197.) On the contrary, I hold that, while inequality of return is the cause alike of rent and of profits, equality of return is the law of capital; that there is not, in economic theory, any “no-interest” capital, although there is “no-rent” land and there are “no-profits” employers; and, finally, that all portions of capital do, in proper economic theory, bear an equal rate of interest, differences of actual returns being due either to the element of risk, requiring the insurance of the principal sum, or to the effects of ignorance and inertia in the money market. Instead, therefore, of holding with Mr. Webb that the “trifle of interest” paid (to others or to himself) by the least favored producer for his “minimum of capital” may properly be disregarded “as merely equivalent to that ‘gratuitous capital,’—such as roads, pavements, and policemen, elsewhere provided free of

\* I really cannot bring myself to answer the questions which Mr. Macvane propounds to me, on this subject, on pages 13 and 14 of his article: “Further, when ‘interest is to be deducted,’ it would be necessary to know whether this means interest on perfect security or on ordinary mercantile security or on such security as the individual employer in each case happens to be able to offer, for interest varies in the same loan market with the character of the security. Also, we should need to know whether, in times of temporarily high interest, the laborers are to be charged at the high rate on the whole capital of the country or only on the portion actually borrowed at the high rate.”

charge to other producers,"— it appears to me that the interest paid under such conditions must be taken, theoretically, as equal in rate to that paid elsewhere; while, in fact, that charge is likely to be heavier, per unit of capital, than in the case of production taking place under more favorable circumstances.

(*p*) Coming now to the analysis of the constituents of the employing class offered in the April article, Mr. Macvane expresses his strong dissent from my views. He holds that the differences of profits actually realized by employers are due far more to differences of opportunities than to those of abilities. Indeed, he seems, at points, disposed to hold the latter rather a hindrance than otherwise, expressing the opinion that "to work hard and save hard," until they can command capital of their own, is "an ordeal that natural ability for management on the large scale does not help men to face successfully. It demands, rather, plodding patience and severe self-denial." (p. 3.) The possession of capital is, in Mr. Macvane's sight, a far more efficient cause in enabling men to carry on production on a large scale than high industrial quality. The "captain of industry" he considers "a rather mythical personage." Moreover, while thus assigning a decided preference to opportunities over abilities as the cause of business success, Mr. Macvane assigns an extraordinary degree of importance to still other elements. "Mere luck," he says, "in trading, skilful speculation, taking advantage of the ignorance or the fears or the necessities of other men, corners, craftiness, and even knavery, are often much shorter roads to riches than actual production is." (p. 12.) Incidentally to the expression of these views, he ridicules my characterization of the employing class, speaking as if I had attributed to every successful employer high intellectual qualifications, and charging upon me the absurd notion that "the born manager, on coming of age, had only to whistle the proper note, in

order to have all the requisites of production laid at his feet." (p. 2.)

1st. I know of nothing whatever in any writings of mine which would justify such a statement as that above, — nothing which disparages the importance to any man of natural ability, however gifted, of long experience and thorough training. Mr. Macvane appears to consider the need of "plodding patience and severe self-denial" to be an ordeal through which men of smaller parts and lower natures pass most successfully. But, surely, that is a poor, paltry, and peevish genius which, for the sake of ultimate mastery, does not submit itself bravely and cheerfully to any trial, however long and severe, which may lie in its path. Such might be the genius of a brilliant rhetorician or dialectician, but not of a really great man of affairs. Had not Stewart and Vanderbilt "natural ability for management on the large scale"? Yet their youth and early manhood were passed amid severe privations, and the first efforts of their powers were spent in the operations of a petty commerce. The same is true of ninety-five, if not ninety-nine, out of every hundred of conspicuously successful careers. The trials and hardships which Mr. Macvane considers as a mere senseless obstruction to the passage of men forward to their work in life, and as, indeed, holding back those of better parts, while admitting more readily the men of commonplace character and mind,—these trials and hardships are, in truth, among the conditions of the highest success; and I must consider the opposite doctrine a poor sort of history and a poorer sort of moral philosophy to be taught to American youth.

2d. Instead of idealizing the employer and treating all profits as due to remarkable intellectual and moral endowments, as Mr. Macvane intimates I have done,\* I have

\* I have no wish to idealize the successful employer of labor. He may easily be found to be a very unamiable and a very uninteresting person. For the perfect temper of business something, doubtless, of hardness is needed,

sought to exhibit a very wide range of industrial ability, from the lowest all the way up to the highest.

8d. Mr. Macvane appears to think that it would be conclusive against my theory of the Source of Business Profits that it should be shown (as to which he confidently expresses his individual opinion) that the successful conduct of business is, in the larger proportion, due to exceptional opportunities rather than to exceptional abilities. Yet, in fact, that theory would be equally well established, were it proved that business success depends wholly upon exceptional opportunities, and not at all upon exceptional abilities. The difference to social philosophy would indeed be great, but to economics the question is altogether indifferent.\*

4th. But I take issue with Mr. Macvane on the opinion that business success is mainly due to privilege and opportunity rather than to individual character and power, and I appeal with the utmost assurance to my countrymen whether I am not right in saying that the latter are far more efficient than the former in securing profits. Have not a vast majority of all the business houses with us which have achieved notable success been founded by men who owed almost nothing to opportunity, who struggled up to their high places in the industrial order, not

just as it is the alloy of baser metal which fits the gold for circulating in the hands of men. A little too much of sensibility or a little too much of imagination is often a sufficient cause of failure in the stern competitions of business. The successful *entrepreneur* need not even understand the theory of trade, or be a financier in the larger sense of the word. *The Wages Question*, p. 251.

\* The successful conduct of business under free and active competition is due to exceptional abilities or to exceptional opportunities. Whether due to exceptional abilities or to exceptional opportunities, my proposition could be equally well established, just as it makes no difference, in the theory of rent, whether a piece of land owes its superior advantages, for the purposes of cultivation, to higher natural fertility or to closer proximity to the market to be supplied. Yet it cannot be a matter of indifference to social philosophy whether the power to command profits be due to exceptional abilities or to exceptional opportunities. F. A. Walker, *Political Economy*, 1883, pp. 248, 249.

only without adventitious helps, but against poverty or actual misfortune? On the other hand, what social phenomenon is more familiar than that of great houses, deeply founded, which have enjoyed great prestige, wide connections, and large accumulated capital, dwindling little by little, if not brought actually to their downfall, simply because the management, which had been strong and brave and wise, became commonplace, purposeless, timid, and weak? \* For one, I do not believe that the American mind will readily accept Mr. Macvane's views of the causes which in general govern success in business.

In older countries, where prescription is more powerful, where industry is largely pursued within traditional lines, where capital is more conservative, status and structure do, in no inconsiderable degree, constrain the movements of trade and production. All this was sufficiently covered by my qualification as to "full and free competition." Yet even in the most stable and conservative industrial nation of the Old World we find Professor Marshall saying: "Many employers of labor—in some parts of England, more than half—have risen from the ranks of labor. Every artisan who has exceptional natural abilities has a chance of raising himself to a post of command."

5th. Mr. Macvane would only touch my theory of the Source of Business Profits by alleging that accidents and pure chance, or else fraud, force, and chicanery, are the real predominant reasons for success or failure in business life. Were this indeed so, that theory would fall to the ground, and the socialists would be right in denouncing the capitalist-employer as the robber of the workingman and the enemy of society.

(*q*) The next of Mr. Macvane's objections to my theory of profits is that which arises from the formal attitude of the laborer in production, as hired by the employer and

\* The recent history of the Baltimore & Ohio Railroad exhibits a striking example in point.

working at stipulated wages. Mr. Macvane finds this fact to be dead against my theory,—“so dead against it that one finds some call for self-restraint in soberly arguing the matter.” If it be true that the laborer works for wages stipulated in advance, how can he have any such interest in the product as is implied in my use of the word *residuary*? Mr. Macvane declares that the laborer is, indeed, “precisely the claimant against whose right to the position there is a strong *prima-facie* case.” (p. 14.) Again, he says (p. 21) that it is of the very essence of wage-paying that wages should not be contemporaneous with rent and profits. “The wages that correspond, as an economic share, to the rent\* and profits of any given time, have been paid and consumed before the profits appeared. They are, in reference to the rent and profits, wages of the past.”

Now there is a *prima-facie* case against the laborer occupying the economic place I have assigned him; but it is sometimes the duty of students of science to investigate *prima-facie* cases: to go below the surface, and ascertain if something more or other exists than has appeared. This was precisely what was attempted in the April article. Fully recognizing that, in any given instance, the laborer is, by force of contract, debarred from claiming more than a certain amount,—the amount, namely, which was stipulated as his wages,—I ventured to inquire, *What is it that fixes the terms of such contracts?* why is it the employer promises to pay and the laborer agrees to receive such an amount, no more and no less? There must be some reason for this. Otherwise, the employer might have promised to give twice as much in wages or the laborer might have consented to accept only one-half as much. The

\* Yet rent is generally, by force of contract, determined, not only before wages are paid, but even before the laborers are hired, and is thus not only not contemporaneous with profits, but even antecedent to wages. Mr. Macvane can understand how rent can be advanced out of capital, but paid out of the product, though he cannot understand how this should be true of wages.

force of contract is a sufficient reason for the laborer claiming no more in the given instance, but the force of contract has no power over the demand he may make as to to-morrow's or next week's labor. What is it, then, which is to govern the terms of the next contract which the laborer and the employer are between them to make?

The answer to this question I find in the anticipated value of the product, after deduction of the amounts necessarily to be paid on account of rent and interest. These latter amounts are determined by competent causes, which have already been sufficiently indicated. They are, as we have shown, not necessarily increased by an increase in the productiveness of industry, nor do they depend on the desires of those who are to receive them. Landlords have nothing to do with determining the value of their land \* for rental purposes. The owners of capital have, broadly speaking, nothing to do with fixing the rate of interest beyond supplying the condition of perfect competition, which has been assumed throughout the argument.

If the holders of land and owners of capital can exert no influence upon rent and interest beyond supplying the condition of perfect competition, have the employers of labor anything more to say as to the amount which should be deducted as profits from the product? I answer, No, perfect competition being conceded. The anticipated value of the product being what it is, employers will compete among themselves for the profits of production down to the point where profits vanish. No matter how much the anticipated value of the product may be increased, no economic cause can be invoked which will require them to pay more in rent, unless more land is to be used, or to pay more in interest, unless more capital is to be used; but, provided the laborers, on their part, are alert, active, and aggressive in the pursuit of their own welfare, the employers will be obliged to increase wages, *pari passu*, with every increase

\* We are here speaking of economic rent, which excludes improvements made through investments of capital.

of production. If the current rates of wages are such as to leave any excess of produce, after the payment of wages, interest, and rent, the competition of employers among themselves for a share of such excess \* must go forward until that excess disappears.

(r) I said until "profits vanish." By this is of course meant profits in case of the employers of the lowest industrial grade who remain solvent. Mr. Macvane, indeed, denies my right, upon my own grounds, to take the solvent employers alone into account with reference to the cost of production.

One naturally asks [he says] why the "no-profits" employer should have this function, seeing that there are always in every business, as Mr. Walker himself tells us, some employers who are not only making no profits, but are making losses. The products of these losing employers are continually in the market. Why should they not regulate the price rather than the products of employers who are

\* Mr. Macvane complains that I have given "no clew for tracing this increase [of product] beyond the hands of the employing class and into the possession of the laborers." (p. 26.) Again, "Mr. Walker gives no explanation of the process by which, in his view, the increase of product is carried at once to the wages of labor: he only finds no economic reason why it should go anywhere else." (p. 25.) I confess the latter seems to me a very good reason why it should go there: otherwise, all our geometries would have to be rewritten.

Mr. Macvane continues: "All competition can do is to remove or prevent inequalities in wages. It can bring all laborers of the same grade to the same level of wages. But it has itself nothing to do with setting the level. Competition of laborers is powerless to raise all wages, and our present question relates to a general rise. If the competition to which he [Mr. Walker] refers be that of employer with employer to get control of laborers, I can only say that here again all competition of itself can accomplish is to prevent or remove inequalities, to prevent one employer from getting laborers of a given grade for lower wages than another employer pays. Competition simply enforces the level on everybody." (p. 25.) It is needless to spend time in pointing out the inadequacy of this view of competition. If the competition of employers among themselves for the profits of employment has nothing to do with fixing the general level of wages, why is that level, at any time, where we find it to be? Why is it not lower by one-quarter, one-third, or one-half? Mr. Macvane alleges that I have adduced no force to bring about the result which I have indicated as economically reasonable. I answer, Competition is the force which, when full and free, brings all things in the realm of industry to their respective positions, according to the economic reasons prevailing, in the given situation.

doing indefinitely better? . . . What should we think of Ricardo, if, in developing his theory of rent, he had "thrown out of account" several of the poorest grades of land in constant use,\* in order to find the basis for prices and rent? (p. 4.)

To this, I reply that "losses" represent failure of competition. Were competition perfect, with all which that implies, an employer who carried on production without getting back, through the sale of his products, the wages paid, the cost of materials, etc., plus his own subsistence, would be instantly thrown out. In the actual world of business, especially with the credit system highly developed and under the accidents of the inheritance or the previous acquisition of wealth, an employer may go on for a while producing at a loss, either sinking his capital or subsisting himself at the expense of his creditors. It was with reference to this condition that practical advice was offered in the April article concerning the causes — *e.g.*, bad money, protection, ineffective laws concerning insolvency — which tend to bring incompetent men into the conduct of business, and keep them there against the natural effort of trade and industry to throw them out.

The cases of men who actually do not get back the price of materials, the wages of labor, the cost of their own subsistence, etc., are exceptional. There cannot be an indefinite number of such employers, and these cannot carry on business through an indefinite period; and, since the demands of the market require goods to be produced (the proof of which demand is that goods are produced) by men who can and do get back the cost of production, plus their own necessary subsistence, in the price of their product, those whom we may call the bankrupt employers

\* In the same connection, Mr. Macvane says, "In the case of land, we take the poorest in *steady use* as the regulator of price." This qualification destroys the whole force of the objection. The losing employers come into and go out of production, like lands along the lower limit of productiveness, which are now cultivated and now thrown out of cultivation.

do not fix the price of goods.\* The normal price of any species of commodity is determined by the cost of production of that portion of the necessary supply which is produced at the greatest disadvantage. Now, if the necessities of production, upon the scale suited to meet the demands of the market, require the services of a great number of employers, and if these employers differ among themselves in the matter of industrial efficiency, then the "greatest disadvantage," *quoad hoc*, exists in the case of that portion of the necessary supply which is produced by the employers of the lowest grade of business ability who do earn a scanty living, conduct business, and remain solvent. The fact that these men do remain solvent, after paying wages, the cost of materials, etc., and also subsisting themselves, proves that they sell their goods at prices to meet these conditions. That the goods are not sold lower under competition is because production cannot be carried on to the extent required by the demands of the market without meeting these conditions. Production by bankrupt employers does not fix the (normal) price of goods; but such production is highly prejudicial to the general interests of the community, causing industrial disturbances, unnecessary fluctuations in trade, and at times breaking down the market and creating industrial panics and distress.

FRANCIS A. WALKER.

\* Any more than would a limited number of employers who should choose to give away their goods, without the attempt to get back any part of the cost of production.

## GROUND RENTS IN PHILADELPHIA.

It has been claimed for Philadelphia that it is peculiarly the "city of homes." \* The number of people living in separate houses owned or rented by them is greater in Philadelphia than in any other American city.†

The tenement house in Philadelphia is practically unknown. The mechanic, the laborer, the clerk, as a rule, all live in their own or rented houses. The demand for small houses of moderate cost has always been a fixed

\* *The Report of the Commissioners to devise a Plan for the Government of Cities of Pennsylvania*, Dec. 29, 1887, on p. 9, states that "the city of Philadelphia, appropriately called 'the city of homes,' contained in August, 1876, 143,936 dwelling-houses. It is estimated, by those best informed on the subject, that 5,000 have been built since that time, so that in round numbers Philadelphia now contains 150,000. The number of votes cast at the last municipal election was 127,520, and it is not claimed that the city contains more than 135,000 voters. It will thus be seen that the great bulk of voters are either owners of houses or tenants paying rent. Hundreds of blocks of comfortable houses, renting from twelve dollars and one half to twenty dollars per month, are scattered through the city. These are mainly occupied by the more intelligent class of mechanics and operatives in manufacturing and other establishments."

† The census for 1880 shows the following:—

	Population.	No. of Dwelling-houses.
New York, . . . . .	1,206,299	73,684
Philadelphia, . . . . .	847,170	146,412
Boston, . . . . .	363,839	43,944
Chicago, . . . . .	503,663	61,069
Baltimore, . . . . .	332,313	50,833

These figures speak for themselves. Baltimore, with a smaller population than Boston, has a greater number of dwelling-houses. In that city, ground rents are a favored method of improving land. The general method of dividing the number of inhabitants by the number of dwelling-houses does not fully represent the entire phase of the question. For instance, according to the statistics of the State Board of Health, there were in New York in 1872 between 14,000 and 15,000 tenement houses, with an average number of 48 individuals to a house, showing that 48 per cent. of the population of New York inhabit tenement houses.

factor in the development of Philadelphia, and this demand has been constantly met. That the result thus obtained is a valuable one for the individual and the community is conceded. It is far better for the community when the family, which is the unit of the State, owns its hearth-stone, or at least can be the *quasi*-owner of an undivided house, at a moderate rent. This conclusion is more especially true as applied to the poorer classes. Flats or apartments renting from one to six thousand a year, since they confer all the luxuries and comforts and almost the privacy of separate houses, need not be considered here; but the lower down one goes in the scale of rents, the nearer do these flats shade off into tenement houses, with their objectionable features. In Philadelphia, however, neither the tenement house for the poor nor the flat for the rich has taken root. Each is equally rare in the Quaker city.

The cause of this is difficult to demonstrate with absolute accuracy. A fixed municipal trait is generally due to a combination of causes, and this is doubtless the case with the one under consideration. When Penn landed on the shores of the Delaware, in 1681, one of his most cherished ideas was the foundation of a great town; and his beloved city was laid out on what must have seemed, in those days of the wilderness, a scale of magnificent distances. It stretched about two miles, from the Delaware to the Schuylkill, with a mile front on each. His comprehensive scheme included a grant of a city lot to each of the first adventurers; but, as this was soon seen to be impossible, an apportionment was made of lots in the adjacent lands, which became known as the liberties. The city grew to be the American metropolis. In Germantown and the adjoining liberties and districts, settlements grew into towns modelled after the mother city, until at the time of the consolidation, in 1854, there were twenty-nine separate districts, boroughs, and townships,

each of considerable size and all closely connected with the city proper. The first settlers and their descendants were mainly thrifty and well-to-do, and Philadelphia soon became first the main commercial and then the principal manufacturing city of the land. Manufactories were scattered through the incorporated districts and boroughs and city, forming nuclei for large bodies of mechanics, laborers, shop-keepers, and their concomitant trades and professions. This development around so many centres, allowing as it did ample room for the expansion of the respective settlements within easy reach of business centres, undoubtedly accounts for the possibility of the separate house system. The necessity for crowding, which the same population would have involved if clustered round one centre, was absent. Had the business centre been entirely in Philadelphia, the primitive and tedious method of transit in vogue in all great cities up to the middle of this century, and later, would have made crowding necessary. But it followed naturally from the diffusion of trade centres that the different areas of land brought within reach of building improvements were sufficient to keep the selling value of land down to a figure which admitted of the erection of multitudes of two and three story houses, with back buildings, side and back yards, and all the improvements of their respective periods. The situation of the city was well adapted to broad and easy expansion, extending as it does up the Delaware River fifteen miles, and stretching westward to an irregular line distant from four to fourteen miles from that river, and covering an area of one hundred and twenty-nine square miles.\*

\* The city has suffered somewhat from want of rapid transit ; for the efficiency and influence of the street-car companies and the steam railroads, and the conservatism of the people, have postponed elevated railroads, but these same corporations have afforded easy access to the suburbs in every direction. To the central Broad Street station, seven distinct lines of railroad, which traverse the suburbs in as many different ways, bring thousands of citizens in

But there has been another factor in the development of this system, which, while it is generally recognized by every one familiar with real estate in Philadelphia, has never been formulated; and that is the influence of ground rents on the growth of small freehold estates in the city of Philadelphia. Admitting that there may have been other potent influences, as above indicated, it may be safely claimed that the taking up of much of the unimproved land upon ground rent, and the care and skill with which that estate has been moulded to fit the needs of the community, have generally facilitated not only the division of land among many owners, but the improvement thereof by the erection of a multitude of small and comfortable houses. The estate known as a ground rent has been developed with considerable precision by the legislature and by the interpretation of the common law by the courts in a long series of adjudicated cases. With the legal aspect of the matter we have little to do, except in so far as it is necessary clearly to define the term for the benefit of the lay reader.

Ground rents are of common-law origin, and in some shape were common in most of the original colonies; but, although ground rents are frequently found in Maryland and sometimes in Delaware and occasionally in New Jersey, and the old Rensselaer Wyck leases of New York partook of their nature, it is in Pennsylvania, and

and out from suburban homes in the city limits. Five or six other railroads bring their thousands to and fro daily to other depots in different parts of the city. After the consolidation in 1854, the city began to be troubled with "crowding up." This tendency did not manifest itself in the erection of tenement houses, but in what was known as three-room houses. This class of houses was built on back courts and blind alleys. The houses were only one room deep, and either had no back or side yards or the smallest possible one of ten or twelve feet, barely big enough to contain an out-house. The drainage, such as there was, was surface drainage. But the street-cars, introduced about 1858, relieved this pressure just about the time the pinch began to be felt; and on April 21, 1855, the legislature passed an act aimed at the three-room house, prohibiting the erection of any house without at least 144 square feet of back or side yard, and requiring that no street or alley shall be less than 20 feet wide.

especially in Philadelphia, that this estate has attained its full development and most potent influence. In England, long leases in the nature of rent charges were called ground rents. A rent charge in England is a rent reserved in a conveyance in fee, with a clause of distress or a fee-farm turned into a rent charge by force of the statute *Quia Emptores*, which forbade subinfeudation and abolished intermediate tenure, the reservation saving the rent from the indispensable incident of fealty. This method of creating a rent charge was never favored in Pennsylvania, as it was in the nature of a charge on land and not a separate estate. The statute of *Quia Emptores*, by virtue of the royal charter to Penn, was never in force in the Province of Pennsylvania. It was possible, therefore, for intermediate tenure to exist and for a rent to be reserved out of a grant of land in fee, which would be in the nature of a rent service. A rent service is a rent reserved by the grantor of land to himself and his heirs. In the earlier cases there seemed to be some confusion as to the exact legal status of ground rents in Pennsylvania, and they were commonly spoken of as rent charges; but, in the great leading case of *Ingersoll v. Sergeant*, 1 Wharton, 359, decided in 1836, the matter was finally disposed of by Chief Justice Gibson, the most acute and profound jurist that ever sat on the Supreme Bench of Pennsylvania. The whole subject of tenure as it was brought over to us by Penn and modified by the Revolution and the Divesting Act of November 27, 1779, was exhaustively considered, and a ground rent defined as a rent service, an estate of inheritance reserved to himself and his heirs by the grantor of lands in fee. Now, a rent service can only exist by virtue of the feudal system and its incidents. Pennsylvania was held by Penn under tenure of free and common socage as of the castle of Windsor, with fealty and the return of two beaver-skins annually. The Revolution transferred the return and fealty of the Proprietaries from the King to the Common-

wealth; and the Divesting Act, acquiesced in by the Penns, divested the proprietor of all rights and privileges as such, including his quit rents.\* In 1868, Chief Justice Woodward, in the case of *Wallace v. Harmstad*, 8 Wright, 492, in striving to reach the individual equities of a particular case, while admitting the binding force of the rule of law that ground rents are rent service, permitted himself to be betrayed into the dictum that title to lands in Pennsylvania was allodial, and no remnant of feudal tenure existed; or, as he puts it, "All our lands are held mediately or immediately of the State, but by titles purged of all rubbish of the dark ages, excepting only feudal names of things not any longer feudal." This dictum has been severely criticised by Chief Justice Sharswood; and in a late case, *Whitney's Estate*, 20 W. N. C. 40, one of the most learned of Philadelphia judges, Penrose, J., of the Orphan's Court, speaking of this decision, says: "Of course, even the dictum of a judge of the Supreme Court is to be treated with the most profound respect; but we cannot close our eyes to the fact that the learned judge

\* The quit rents reserved by Penn must not be confounded with the ordinary ground-rent estate as known to the law under that title and as considered in this paper. They were, however, of the same character of estate and a pure rent service. They were exceedingly unpopular with the settlers, and became the subject of frequent controversy between the Penns and their Governors and the Provincial Legislature. Petitions were made for the privilege of paying them off; and it was also contended that their proceeds should be applied to the support of the Provincial Government, although this position was never conceded by the Proprietary. It is questionable whether the Divesting Act, as far as it took away the proprietary private right to these rents-already reserved, would have been held a lawful exercise of the power of the legislature. The liberal compensation of £130,000 made to the Penns by the Pennsylvania Assembly by way of recognition of the service of the venerated founder of the Commonwealth and for the welfare of his family, and the acceptance by the Penns of this sum and their consequent acquiescence in the act, has happily disposed of any such question. The history of quit rents is exceedingly interesting as regards land tenure in Pennsylvania, but has no further bearing on our subject than as above indicated.

On this point, see *Penn v. Penn.*, 2 Yeates, 550; *Address on the Nature and Study of the Law*, by William Rawle, p. 22; *Original Land Titles in Philadelphia*, by Lawrence Lewis, p. 51; 10 *Hazard's Hist. Reg. of Penn.*, pp. 144 and 113; 1 *Smith's Laws*, 479.

[Woodward] was rather inclined to make assertions which his brethren, in subsequent cases, where the point was directly involved, have not hesitated to declare extrajudicial and unsound. Of this there are many instances: among them, *Wallace v. Harmstad*, a case where homage is confounded with fealty. See Sharswood's *Lectures on Feudal Law*, p. 223." It may, therefore, be safely concluded that rent service in Pennsylvania stands on the tenure of free and common socage, with service of fealty mediately or immediately to the Commonwealth. The theories of rent service and allodial titles are inconsistent. Incident to its nature as a rent service are right of distress and capacity of apportionment on the division of the land.

A ground rent is reserved by indenture. The deed is the act of both parties, and the value or principal of the estate is usually considered one of which the rent would be the annual return of six per cent. or about sixteen years' purchase. The deed usually has a clause of re-entry and distress, a waiver of exemption, covenant for payment, and certain provisions as to redemption. Being a rent service, the clause providing for re-entry and distress on default is not necessary. Being also a separate estate from the fee, it is separately assessed and taxed as real estate, although now in all modern deeds the *terre-tenant*, or grantee of the deed, covenants to pay all taxes. The annual rent payments spring into existence and become debts when they are demandable, and carry interest from that time, and are liens on the land from the date of the deed; but all arrears are discharged by a judicial sale, which, however, does not affect the principal or estate. The principal, not being a debt, was not affected by the legal tender acts, although they gave rise to much litigation as regards ground rents, which was finally settled by the Supreme Court of the United States in *Butler v. Horwitz*, 7 Wallace, 258. It is therefore now accepted law that the rental of a ground-rent estate is not a debt within the meaning of any legal tender acts; rent reserved

in coin dollars of a certain weight and fineness cannot be paid by dollars of a less weight and fineness, and a rent reserved in coin dollars cannot be paid in note dollars; rent payable in silver dollars can be paid in gold dollars; and where rent is reserved in so many dollars lawful silver money of the United States, though it cannot be paid in currency, yet it may be paid in any silver or gold coin which Congress has declared to be lawful money and a legal tender at the time when the payment is made. A ground-rent, being real estate, is sold and conveyed as such, and is liable to all its incidents, is subject to judgment, and may be mortgaged. It is the most perfect form of an incorporeal hereditament. It must be reserved by deed with apt words, and may be for a term of years, for life, or in fee; but, in Pennsylvania, it is invariably in the latter form.

The remedies of the owner for default in payment of the annual rental are several and cumulative. He may re-enter after demand made with certain formalities, if he can do so without breach of the peace, and hold the property until the returns of the same pay his rent; or he may bring his action of ejectment to enforce his right of re-entry. But this proceeding is not of common use, and is cumbersome and inconvenient. Distress may be made on the premises, and any chattels found there sold for the rent. And finally there is the action of covenant on the original deed, which results in a personal judgment against the original covenantor, and as regulated by statute is an efficacious proceeding *in rem*, which binds the land in whatever hands it may be. The judgment to be obtained is for rent in arrears, and the principal does not become due by default. So a sale gives a title still subject to the ground-rent estate, and the seller need only protect the property up to a figure sufficient to cover the cost of sale and rent in arrears.

It has been thought best thus to set out with some particularity the legal incidents of the estate for the better

comprehension of its value as a factor in the method of owning real estate in Philadelphia, since by a complete view of the rights and liabilities of both parties the reader may come to a full understanding of its power as a factor in the development of the freehold tenures in Philadelphia. It will be well, also, to summarize its incidents and possibilities.

A holds a piece of land in the outskirts of the city, which is ripe for improvement. He has perhaps neither the capital nor the desire to cumber himself with the outlay of building on it either single houses or blocks. The land is divided into lots, valued, say, at \$500, and sold to X in fee, reserving a ground rent of \$30 a year. X covenants to pay the rent and to put certain improvements thereon. The vendee, therefore, becomes the owner of the fee on easy terms, and is not liable to have the principal, or price of the land, called for until he may be ready to pay it. This fact in itself was a potent inducement for mechanics and others of moderate means in the earlier days to take up land and improve it, and the records of the Recorder of Deeds Office show innumerable instances of the favor in which this estate has been held by investors, builders, and purchasers. For the first one hundred and fifty years, building in Philadelphia was almost entirely by single houses, and the ground was very frequently taken subject to ground rents. These were usually redeemable in fourteen years, after which time they became irredeemable. The act of April 22, 1850,\* however, in great measure inhibited the future creation of irredeemable rents, and one passed April 15, 1869, provided for the compulsory redemption of those previously created; but this act was declared unconstitu-

\* "This act only applies in cases where there is a covenant to pay a certain sum of money within a fixed period in extinguishment of the ground rent reserved in the deed; but where there is only an option to the grantee to extinguish the rent by payment of a capitalized sum within a fixed period, that option must be exercised within the time fixed, otherwise the ground-rent estate still becomes irredeemable. See *Palairer v. Snyder*, 15 W. N. C., 180."

tional, as impairing the obligation of contracts. The court, through Sharswood, J., delivered a remarkably able and elaborate opinion,—*Palairet's Appeal*, 17 P. F. S. 479,—discussing the nature of ground rents and the attempt of the legislature to enforce compulsory sales.

It is to be regretted for the purpose of this paper that anything like accurate statistics of the number of ground rents created from year to year, or even the total number that have existed, cannot be obtained. Nothing short of an examination of the thousands of volumes of the Recorder's Office would furnish this. Many rents, irredeemable and otherwise, have been paid; and, as most existing estates are not taxed separately from the fee, the tax-office records are of no avail. But there is no doubt that, down to recent years in most instances, where land was taken for purposes of improvement, without an outright sale, the purchase was made subject to a ground rent.

In 1831, the first American Building Association was organized at Frankford, Philadelphia, upon which all others in this country have been modelled, it being in turn a reproduction of the Friendly Societies of Great Britain. It would here be impossible to go into the internal workings of these associations,\* for and against which much has been said. Judge Strong, in *Building Association v. Sutton*, 11 Casey, 468, said: "The practical working of these associations has not been what has been anticipated. Though called building societies, they are in truth only agencies by which a greater than legal interest is obtained from the unwary." The decisions of the Maryland courts have been hostile, and in Massachusetts the scheme did not meet with success. They have, however, doubtless contributed largely to the building up in Philadelphia of the large class of small freehold tenements; and they

\*See Endlich on *Building Associations*; article by H. W. Page, Esq., in Volume II. of *American and English Encyclopædia of Law*; papers read by Edmund Wrigley and Joseph T. Doran before the Social Science Association of Philadelphia; Wrigley on *Building Associations*.

readily accepted the scheme of tenure by ground rents as an adjunct to their operations. They have doubtless stimulated the desire, more or less inherent in many workmen, to own their homes. A workman who has no capital, and is dependent upon his wages, may perhaps be able to set aside a surplus of five or ten dollars a month. With this, he buys, say, five shares of stock in a building association, which entitles him to a loan of \$1,000. A lot is purchased on ground rent, say \$500; and a loan is purchased from the association for \$800, at from five to fifteen per cent. premium, as money may sell at the time. The house is erected. The association is secured by the mortgage of the fee, with the stock as collateral. The house-holder pays his rental, \$30 per annum; \$5 a month on his building association stock, \$60; the interest on his loan, say \$96; for taxes, \$12; his water rent, \$5,—making a total of \$170 or \$180 for ten years, at the end of which time the series is wound up, and he has paid \$1,800 to \$2,000 under a compulsory saving fund, and owns his own house, subject to a ground rent. If he had rented, he would have paid out \$1,400 to \$1,600 for rent alone, and would not have owned his house. Of course, could the purchaser have bought outright, he would have been better off; or could he have obtained credit to borrow at six per cent. on mortgage, and then bought the stock as a non-borrowing member, he would have been better off. But the utility of the building association is for the industrious workman without credit, who could not get such a loan, and on whom the obligation to the association acts as an incentive to save money, to keep up his dues.

The field for building associations was found in the scarcity of money and the necessity for paying a high rate for money borrowed; and the willingness of building associations to loan is based on their policy, which permitted them to loan on a junior security—subject to the ground rent—up to the actual value of the building, by reason of their holding the collateral security of the stock of the

borrower, by virtue of which he makes monthly payments on account of his debt, and thus is constantly reducing the same. On a like security, the would-be purchaser could not go to any of the banking institutions or investors and obtain a like loan wherewith to erect his house. The building associations always preferred a ground rent as the senior charge subject to which they should loan, for the obvious reason that the principal thereof could not be called for, so that the association could not be obliged to protect itself beyond the accruing rent of a year, in the event of a default by the owner of the fee.

Some time before the war of 1861, there began a great activity in what was known as bonus building, which may be briefly described as follows: A, holding a tract of land of one or more acres ready for improvement, having divided it into city lots, would sell the same to an irresponsible party,—a man of straw, X,—who would give a bond and mortgage for each property, covering the supposed value of the same after the erection of the contemplated building. Under this advance-money mortgage, A was to advance to B, the builder and real purchaser, to whom an assignment of the property subject to the mortgage had been made by X, the difference between the agreed price for the land and the amount of the mortgage to be made as advances to the builder, payable, as specified, upon completion of certain steps in the building,—i.e., so much when first joists were laid, so much when the second floor was done, so much when under roof, etc. These mortgages, being a first lien, protected the mortgagee from mechanics' liens to the extent of his mortgage. For the above purposes, mortgages were preferred to ground rents, as they were more easily converted, sold, or placed; and, in the "flush" period after the war, the speculator would easily sell his houses for greater or less amounts over the mortgages. Sometimes, the mechanic or material men were paid; but, if the venture failed, they would often be "cut out" by the properties being

sold under the mortgage, when they frequently would not bring the face value thereof. Individuals would suffer; but a net result was that the city had so many new houses, and the neighborhoods generally recovered from the effects of over-building and grew up to them, unless a mistake had been made in erecting too high a grade of house for the place or in calculating the somewhat arbitrary trend in the fashion of municipal emigration.

With the panic of 1873 came great depression in real estate. Thousands of houses, some carrying first and second mortgages, were sold, and did not realize the face of the first mortgage, and many material men and mechanics suffered; and the aid of the legislature was invoked, with the result of the act of June 8, 1881, which inhibited the creation of purchase-money mortgages for a greater amount than the actual value of the unimproved land, at least subordinating the lien of any thus created to the liens of mechanics, etc.\* This stopped the use of mortgages for the bonus building, and revived the popularity of ground rents, the new creation of which had waned for ten or fifteen years. Now they have come again into favor; and, where suburban land is being improved, it is safe to say that seventy to eighty per cent. of land which is improved by erection of the smaller grade of houses is sold to contractors or builders, subject to what is an actual advance-money ground rent, it having been the opinion, thus far unquestioned, that ground rents, being an actual estate, were not covered by the act of 1881.

At the present time, the city improvements are generally made, not so much by individuals, who purchase the lots on ground rent and then erect their own houses, as by large operations in blocks at a time. The tendency of the age to do work by concentration of force renders this necessary, and needs no special comment here. The mechanic can really get a better house for less money in

\* *Pamphlet Laws*, 1881, p. 56.

this way than if he first buys his land and builds himself. Operations like those alluded to, where a block or more is built on ground rent, have all the desirable features of the single purchase, so far as the ultimate owner of the fee is concerned. He has his house, which is worth, say, \$2,000, subject to a ground rent of \$90, which is six per cent. on \$1,500; and he can pay that off at any moment after a certain specified time, or he need never pay the principal.

As a marketable security, these ground rents are not so good as mortgages for a corresponding amount: First, because the ground-rent landlord can never count on calling in his money, and the market might not be such as to favor the sale of such real estate at par at any given moment. For this reason, the prevailing rate of interest is six per cent. against five per cent. or four and one-half per cent. on an equal amount secured by mortgage; and the tenant virtually pays that much additional per annum for his privilege of the optional redemption of his debt. Second, because the fee of the land is liable to be sold out on a judgment at any time, of which event the landlord may know nothing until he comes to collect his rent, unless he watches the monthly list of sheriff sales. His only damage, however, would be that any arrears of interest due would be discharged by the sale, and lost, if the fund derived therefrom was not enough to meet this obligation in addition to costs and taxes.

To summarize our conclusions, it may be said that in the first one hundred and fifty years or so of the life of Philadelphia ground rents were increasingly in favor as a method of taking up land by mechanics and other persons of limited means, who contracted to improve the same by a moderate building. Many of these rents became irredeemable by the terms of the deeds, reference to which show the lots to have been often small and the improvement covenant for only two-story buildings. That beyond all doubt this method, furnishing as it did

an opportunity for the industrious workingman to obtain a home at the outset of his career, without the actual investment of a capital, greatly facilitated the building up of the large class of small freeholders; that the system continued to grow in favor with the capitalists, operators in real estate, and the ultimate purchaser,—is conclusive evidence of the equitable basis of the relation created by the ground-rent estate and of its adaptability to the wants of the community.

The growing demand for safe investments, owing to the vast increase of idle and trust capital, makes good ground rents most desirable investments to hold. Being real estate, however, they are not trust investments in which executors and trustees can invest without the consent of the Orphan's Court. Many of the earlier and now irredeemable ground rents have been reserved on lands the value of which the march of improvements has increased enormously; and they have therefore become, in the language of conveyancers, "gilt-edged" securities, which command a considerable premium at auction by reason of their permanent character. In some parts of the city, however, these gilt-edged ground rents have been held in blocks by conservative families, who would not release them on any reasonable terms; and their existence has served as a bar to the improvement of certain neighborhoods, until the tide has swept by and left those streets stranded with rows of antiquated houses, and the locality tenanted by an undesirable class, who make future improvements still more difficult.

The act of 1850, inhibiting irredeemable ground rents, has removed the only feature, which as a clog to the free circulation of land, was open to criticism as against public policy and contrary to the spirit of our age and country. The advent of building associations found the system of ground rents ready made to their hands; but these societies have, in the judgment of many, reached their greatest development, and their influence and prestige, it is

thought, will be apt to wane in the future, as their success was founded on usurious or excessive rates of interest, and they may not be able to compete with the wealthy institutions now about to enter the field as competitors, and claiming to afford the same relief to scanty credit with less exorbitant rates of interest. And, finally, the large operators who come with these later times have found in the ground rents a system admirably calculated to protect the capitalists and furnish the consumer his house ready built, with the least objectionable kind of encumbrance which it is possible for a wage-winner to have on his house, owing to the non-demandable character of the principal. The equitable flexibility of the ground rent, as developed in Philadelphia, is in marked contrast to the kindred rent service once in force in the immense landed estates of New York, which led to the anti-rent riots of 1846.\*

There remain to be noted two new features, which may have a decided bearing on the future method of continuing the acquisition of homes by the workingman. First, the Real Estate Title Company has inaugurated the system of loaning money on houses at six per cent. up to, say, a three-fourths valuation on mortgages, with the privilege of paying off the same in instalments. This plan is admirably adapted to such purchasers as may have saved enough capital to purchase the equity demanded by the rules of the company. Second, another and more novel plan is that offered by the United Security Life Insurance and Trust Company. This company, incorporated with a capital of \$1,000,000, offers to loan up to eighty per cent. or more of the value of the property on a five, ten, and twenty year term. The scheme then provides for a mortgage by the purchaser to the company, with a policy of life insurance to be issued by the mortgagee company,

\* *The Anti-rent Agitation of the State of New York*, by Edward P. Cheyney, A.M.,—publication of the University of Pennsylvania, No. 2. Porter & Coates : Philadelphia, 1887.

the mortgagor agreeing to make monthly payments, calculated on such a basis that, if he lives out the term, he will pay off his principal, the amount of this payment including a premium on his life which covers the cost of insurance for that short term, so that, in the event of his death during the term, the property is handed over to the beneficiary clear of the mortgage. It is said that the insurance and the payment amount to but a few dollars per month more than the rent would be, and that the purchaser gets his insurance as cheaply as he could buy it elsewhere. The same admirable element of the compulsory saving fund which gave the chief value to the building association is present, while the element of exorbitant interest is absent. In addition to this, the purchaser has, possibly, greater assurance of honest and economical management of the affair in the greater financial ability and resources of a strong financial concern like this. We are advised by the officers of the company that the demand for the opportunities offered by their company has more than equalled the means of the company to supply it, which, as far as their short experience goes, would indicate that a public want has been recognized and met.

But, when all has been said and every element has been examined, nothing can be found to discredit the proposition that, from the earliest days to the present, the ground rent, as developed in Philadelphia, has, by offering a safe security to the original land-owner and an unoppressive burden to the purchaser, greatly encouraged the taking up and improvement of land, either directly or through middle-men; and that the ultimate result has been of benefit to the large class of small freeholders or tenants who demand a separate house as a necessity of life, and who exist in Philadelphia in greater numbers than in any other great city of the world.

EDWARD P. ALLINSON.  
BOIES PENROSE.

## THE TARIFF, 1830-1860.

IN the years between 1832 and 1860 there was great vacillation in the tariff policy of the United States; there were also great fluctuations in the course of trade and industry. A high tariff succeeded a low tariff, and was in turn succeeded by another low tariff. Periods of undue inflation and of great demoralization, of prosperity and of depression, followed each other. The changes in the rates of duty and the fluctuations in industrial history have often been thought to be closely connected. Protectionists have ascribed prosperity to high tariffs, depression to low tariffs; free traders have reversed the inference. It is the object of the present paper to trace, so far as this can be done, the economic effect of tariff legislation during the thirty years of varying fortune that preceded the civil war.

First, by way of introduction, a sketch must be given of the history of the tariff. We begin with the tariff act of 1832, a distinctly protectionist measure, passed by the Whigs, or National Republicans, which put the protective system in a shape such as the advocates of protection hoped it might retain permanently. It levied high duties on cotton and woollen goods, iron and other articles, to which protection was meant to be applied. On articles not produced in the United States, either low duties were imposed, as on silks, or no duties at all, as on tea and coffee. The average rate on dutiable articles was about 34 per cent.

In 1833, the Compromise Tariff Act was passed, and remained in force until 1842. That act, there can be little doubt, was the result of an agreement between Clay and Calhoun, the leaders of the protectionists and free

traders, while it secured also the support of the Jackson administration. Clay had been hitherto the most uncompromising of the protectionists; Calhoun had represented the extreme Southern demand that duties should be reduced to a horizontal level of 15 or 20 per cent.\* The compromise provided for the retention of a considerable degree of protection for nearly nine years, and thereafter for a rapid reduction to a uniform 20 per cent. rate. The tariff of 1832 was the starting-point. All duties which in that tariff exceeded 20 per cent. were to have one-tenth of the excess over 20 per cent. taken off on January 1, 1834; one-tenth more on January 1, 1836; again, one-tenth in 1838; and another in 1840. That is, by 1840, four-tenths of the excess over 20 per cent. would be gone. Then, on January 1, 1842, one-half the remaining excess was to be taken off; and on July 1, 1842, the other half of the remaining excess was to go. After July 1, 1842, therefore, there would be a uniform rate of 20 per cent. on all articles. Obviously, the reduction was very gradual from 1833 till 1842, while in the first six months of 1842 a sharp and sudden reduction was to take place.

Considered as a political measure, the act of 1833 may deserve commendation. As an economic or financial measure, there is little to be said for it. It was badly drafted. No provision was made in it as to specific duties; yet it was obviously meant to apply to such duties, and the Secretary of the Treasury had to take it on himself to frame rules as to the manner of ascertaining the ad valorem equivalents of specific duties and making the reductions called for by the act.† Again, the reduc-

\* The Nullifiers had said that such a horizontal rate was the least they were willing to accept. See the Address to the People of the United States by the South Carolina Convention, in the volume of *State Papers on Nullification*, published by the State of Massachusetts, p. 69.

† The instructions issued from the Treasury Department may be found in *Exec. Doc.* 1833-34, vol. i., No. 43. It has been thought that the act did not apply to specific duties; but this is a mistake.

tions of duty were irregular. Thus on one important article, rolled bar iron, the duty of 1832 had been specific, —\$1.50 per hundred-weight. This was equivalent, at the prices of 1832, to about 95 per cent. The progress of the reductions is shown in the table.\* Up to 1842, they were comparatively moderate; but in the six months from January 1 to July 1, 1842, the duty dropped from 65 to 20 per cent.† Producers and dealers necessarily found it hard to deal with such changes. It is true that a long warning was given them; but, on the other hand, Congress might at any moment interfere and modify the act. Finally, and not least among the objections, there was the ultimate horizontal rate of 20 per cent.,—a crude and indiscriminating method of dealing with the tariff problem, which can be defended on no ground of principle or expediency. The 20 per cent. rate, according to the terms of the act, was to remain in force indefinitely, that being the concession which in the end was made to the extremists of the South.‡

As it happened, however, the 20 per cent. duty remained in force for but two months, from July 1 till September 1, 1842.§ At the latter date, the tariff act of 1842 went

* Year.	Duty, per cent.
1834	87
1836	80
1838	72.5
1840	65
Jan. 1, 1842	42.5
July 1, 1842	20

† This calculation is on the basis of the prices of 1833. If prices changed (and they did change greatly), the rates under the Compromise Act would vary materially from those given in the text; since the ad valorem equivalent of the specific duty, and its excess over 20 per cent., were ascertained for each year according to the prices of that year.

‡ Clay, who drafted the act, probably had no expectation that the 20 per cent. rate ever would go into effect. He thought Congress would amend before 1842, and intended to meet by his compromise the immediate emergency only. See his *Works*, ii. pp. 131, 132. He tried to show Appleton and Davis, two leading representatives of the protectionists, that "no future Congress would be bound by the act." See Appleton's speech on the Tariff Act of 1842, Appendix to *Congr. Globe*, 1841-42, p. 575.

§ The Compromise Act was so loosely constructed that doubt was entertained whether under its terms any duties at all could be collected after June

in force. That act was passed by the Whigs as a party measure, and its history is closely connected with the political complications of the time. The Whigs had broken with President Tyler, and had a special quarrel with him as to the distribution among the States of the proceeds of the public lands. Tyler vetoed two successive tariff bills because of clauses in them in regard to distribution. The bill which he finally signed, and which became law, was passed hurriedly, without the distribution clause. Attention was turned mainly to the political quarrel and to the political effect of the bill in general.\* The act, naturally enough, was a hasty and imperfect measure, of which the details had received little consideration. The duties which it levied were high,—probably higher than they would have been had the tariff discussion been less affected by the breach between Tyler and the Whigs. The act, though distinctly protective, and proclaimed to be such by the Whigs, had not behind it such a strong popular feeling as had existed in favor of the protective measures of 1824, 1828, and 1832. In the farming States, the enthusiasm for the home market idea had cooled perceptibly; and in the manufacturing States the agitation came rather from the producers directly interested than from the public at large. There is much truth in Calhoun's remark that the act of 1842 was passed, not so much in compliance with the wishes of the manufacturers as because the politicians wanted an issue.†

30, 1842. The point was carried before the Supreme Court, which decided, however, that the rate of 20 per cent. was in effect during the two months before the act of 1842 went in force. (*Aldridge v. Williams*, 3 Howard, 9.) Mr. Justice McLean dissented; and there is much force to his dissenting opinion and to the argument of Mr. Reverdy Johnson, the counsel against the government.

\* A full account of this struggle is in Von Holst's *Constitutional History*, iii. pp. 451-463.

† *Works*, iv. pp. 199, 200. Calhoun thought that a good deal was due also to the influence of the "moneyed men" who wanted the Treasury to be filled.

The act of 1842 remained in force for but four years. It was in turn superseded by the act of 1846, again a political measure, passed this time by the Democrats. The act of 1846 carried out the suggestions made by Secretary Walker in his much debated Treasury Report of 1845. Indeed, it may be regarded as practically framed by Walker, who professed to adhere to the principle of free trade; and the act of 1846 is often spoken of as an instance of the application of free-trade principles. In fact, however, it effected no more than a moderation in the application of protection. The act established several schedules, indicated by the letters A, B, C, D, and so on. All the articles classed in schedule A paid 100 per cent., all in schedule B paid 40 per cent., all in schedule C paid 30 per cent., and so for the rest. Schedule C, with the 30 per cent. duty, included most articles with which the protective controversy is concerned,—iron and metals in general, manufactures of metals, wool and woollens, manufactures of leather, paper, glass, and wood. Cottons were in schedule D, and paid 25 per cent. Tea and coffee, on the other hand, were exempt from duty.

The act of 1846 remained in force till 1857, when a still further reduction of duties was made. The revenue was redundant in 1857, and this was the chief cause of the reduction of duties. The framework of the act of 1846 was retained,—the schedules and the ad valorem duties. The duty on the important protective articles, in schedule C, was lowered to 24 per cent., cottons being transferred, moreover, to that schedule. Certain raw materials were at the same time admitted free of duty.

The act of 1857 remained in force till the close of the period we have under examination. We begin with a high protective tariff in 1832, then follows a gradual reduction of duties, ending in 1842 with a brief period of very low duties. In the four years, 1842–46, we have a strong application of protection. In 1846 begins what

is often called a period of free trade, but is in reality one of moderated protection. In 1857, the protection is still further moderated, and for a few years there is as near an approach to free trade as the country has had since 1816.

Turning now to the economic effect of this legislation, we have to note, first, its connection with the general prosperity of the country. That there was a distinct connection is asserted by both protectionists and free traders. The protectionists tell us that the compromise tariff caused the disastrous crises of 1837 and 1839, that the high tariff of 1842 brought back prosperity, that depression again followed the passage of the act of 1846, and that the panic of 1857 was precipitated by the tariff act of 1857. On the other hand, free traders not infrequently describe the period between 1846 and 1860 as one of exceptional prosperity, due to the low duties then in force.

It would not be worth while to allude to some of these assertions, if they were not so firmly embedded in current literature and so constantly repeated in many accounts of our industrial history. This is especially the case with the curious assertion that the crises of 1837 and 1839 were caused by the compromise tariff of 1833 or connected with it. This assertion had its origin in the writings of Henry C. Carey, who has been guilty of many curious versions of economic history, but of none more remarkable than this. It may be found in various passages in his works; and from them it has been transferred to the writings of his disciples and to the arguments of protectionist authors and speakers in general.\* Yet no

\* References to the supposed effects of the act of 1833 abound in Carey's works. As good a specimen as any is this: "Agitation succeeded in producing a total change of system, in the tariff of 1833. . . . Thenceforward the building of furnaces and mills almost wholly ceased, the wealthy English capitalists having thus succeeded in regaining the desired control of the great American market for cloth and iron. As a consequence of their triumph, there ensued a succession of crises of barbaric tendency, the whole terminating, in 1842, in a

fair-minded person, having even a superficial knowledge of the economic history of these years, can entertain such notions. The crises of 1837 and 1839 were obviously due to quite a different set of causes,—to the bank troubles, the financial mistakes of Jackson's administration, the inflation of the currency, and of those general conditions of speculation and unduly expanded credit which give rise to crises. The tariff act had nothing whatever to do with them. Indeed, the reductions in duty under it, as we have seen, were slight until 1840, and could hardly have influenced in any degree the breaking out of the panics. Even if the reductions of duty had been greater, and had been made earlier, they would probably have had no effect, favorable or unfavorable, on the inflation of the earlier years or on the depression which followed.

We may dispose at this point of a similar assertion occasionally made in regard to the crisis of 1857,—that the tariff act of 1857 caused or intensified it. This view also is traceable, probably, to Carey. It appears in his writings

scene of ruin such as had never before been known, bankruptcy among the people being almost universal," etc. *Letters on the Iron Question* (1865), p. 4, printed in his *Miscellaneous Works* (1872). To the same effect, see his *Financial Crises*, p. 18; *Review of Wells's Report*, p. 5; *Social Science*, ii. p. 225. Professor Thompson makes the same statement in his *Political Economy*, p. 353. See also Elder, *Questions of the Day* (1871), pp. 200, 201. Senator Evarts, in a speech made in 1883, ascribed to the act of 1833 "a bankruptcy which covered the whole land, without distinction of sections, with ruin." The pedigree of statements of this kind, which are frequent in campaign literature, can be traced back to Carey. Doubtless Carey wrote in good faith; but his prejudices were so strong as to prevent him from taking a just view of economic history.

Oddly enough, Calhoun ascribed the crisis of 1837 to the fact that duties under the act of 1833 remained *too high*. The high duties brought in a large revenue and caused a surplus in the Treasury; the deposit and distribution of this brought inflation and speculation, and eventually a crisis. *Works*, iv. p. 174. No doubt, the high duties were one cause of the government surplus, and thereby aided in bringing about the crisis, so that this view, incomplete as it is, has more foundation than Carey's explanation. On the other hand, Clay, not unnaturally, took pains to deny that the act of 1833 had anything to do with the troubles of the years following its passage. *Works*, ii. pp. 530, 531 (edition of 1844).

and in those of his disciples.\* In fact, the crisis of 1857 was an unusually simple case of activity, speculation, over-banking, panic, and depression; and it requires the exercise of great ingenuity to connect it in any way with the tariff act. As it happened, indeed, the tariff was passed with some hope that it would serve to prevent the crisis. Money was accumulating in the Treasury; and it was hoped that, by reducing duties, the revenue would be diminished, money would be got out of the Treasury, and the stringency, which was already threatening, prevented.† The reduction failed to prevent the panic; but, at the time, it would have been considered very odd to ascribe the disaster to the tariff act.

On the other hand, it has been very often said that the activity of trade in 1843-44 was due to the enactment of the protective tariff act of 1842. There may be a degree of truth in this. The unsettled state of legislation on the tariff before the act of 1842 was passed, must have been an obstacle to the revival of confidence. After July 1, 1842, there was the uniform duty of 20 per cent.; nay, it was doubtful whether there was by law even that duty in force. It was certain that Congress would wish not to retain the horizontal rate, but would try to enact a new tariff law; yet the quarrel between the Whigs and Tyler made the issue quite doubtful. Such uncertainty necessarily operated as a damper on trade, and the passage of any act whatever, settling the tariff question for the time being, would have removed one great obstacle to the return of activity and prosperity. It is even possible that the passage of the act of 1842 may have had a more direct

\* Carey speaks in one place of "the terrific free-trade crisis of 1857." *Letters to Colfax*, p. 15; *Financial Crises*, p. 8; *Review of Wells*, p. 5 (all in his *Miscellaneous Works*). Thompson (*Political Economy*, p. 357) says: "In 1857, Congress reduced the duties 25 per cent. . . . It at once intensified all the unwholesome tendencies in our commercial and industrial life. . . . Another great panic followed through the collapse of unsound enterprises."

† See a letter from a Boston merchant to Senator Wilson, *Congr. Globe*, 1856-57, Appendix, p. 344; and the statement by Senator Hunter, *ibid.*, 329.

effect than this. No doubt, in the regular recurrence of waves of activity and depression, the depression of 1840–42 would soon have been followed, in any event, by a period of activity. The point at which activity will begin to show itself under such circumstances is largely a matter of chance. It begins, for some perhaps accidental reason, with one industry or set of industries, and, the materials for general revival being ready, then spreads quickly to the others. In the same way, when the materials for a crisis are at hand, a single accidental failure may precipitate a general panic. In 1842–43, the high duties of the tariff act probably helped to make profits large for the time being in certain manufactures, notably those of cotton and iron. Prosperity in these set in, and may have been the signal for a general revival of confidence and for a general extension of business operations. To that extent, it is not impossible that the protective tariff of 1842 was the occasion of the reviving business of the ensuing years. But it is a very different thing from this to say that the tariff was the cause of prosperity, and that depression would have continued indefinitely but for the re-establishment of high protective duties.

In truth, there has been a great deal of loose talk about tariffs and crises. Whenever there has been a crisis, the free traders or protectionists, as the case may be, have been tempted to use it as a means for overthrowing the system they opposed. Cobden found in the depression of 1839–40 a powerful argument in his crusade against the corn laws, and knew that a return of prosperity would work against him.\* Within a few years, the opponents of protection in this country have found in general depression a convenient and effective argument against the tariff. In the same way, the protectionists have been tempted to use the crises of 1837 and 1857, and conversely the revival of 1843–44, to help their case. But the effect of tariffs cannot be traced by any such rough-and-ready

\* See passages in Morley's *Life of Cobden*, pp. 162, 163, 210.

method. The tariff system of a country is but one of many factors entering into its general prosperity. Its influence, good or bad, may be strengthened or may be counteracted by other causes, and it is exceedingly difficult, generally impossible, to trace its separate effect. Least of all can its influence be traced in those variations of outward prosperity and depression which are marked by "good times" and crises. A protective tariff may sometimes strengthen other causes which are bringing on a commercial crisis. Some such effect is very likely to be traced to the tariff in the years before the crisis of 1873. It may sometimes be the occasion of a revival of activity, when the other conditions are already favorable to such a revival. That may have been the case in 1843. But these are only incidental effects, and lie quite outside the real problem as to the results of protection. As a rule, the tariff system of a country operates neither to cause nor to prevent crises. They are the results of conditions of exchange and production on which it can exercise no great or permanent influence.

Remarks of the same kind may be made on the frequent assertion that the prosperity of the country from 1846 to 1860 can be traced to the low duties then in force. He who is convinced, on grounds of general reasoning and of general experience, that the principles of free trade are sound, and that protective duties are harmful, can fairly deduce the conclusion that the moderate tariffs of 1846 and 1857 contributed, so far as they went, to general prosperity. But a direct connection cannot be traced. A number of favorable causes were at work, such as the general advance in the arts, the rapid growth of the railway system and of ocean communication, the Californian gold discoveries. There is no way of eliminating the other factors, and determining how much can be ascribed to the tariff alone. Even in the growth of international trade, where some direct point of connec-

tion might be found, we cannot measure the effect of low duties; for international trade was growing between all countries under the influence of cheapened transportation and the stimulus of the great gold discoveries.\* The inductive, or historical, method absolutely fails us here.

We turn now to another inquiry, as to the effect of the fluctuating duties of this period on the protected industries. That inquiry, it is hardly necessary to say, leads us to no conclusion as to the effect of the duties on the welfare of the country at large. It is quite conceivable, and indeed on grounds of general reasoning at least probable, that any stimulus given to the protected industries indicated a loss in the productive powers of the community as a whole. But it has often been asserted, and again often denied, that the duties caused a growth of certain industries; and it is worth while to trace, if we can, the tangible effect in this direction, even though it be but a part of the total effect.

It is the production of iron in the unmanufactured form that has been most often discussed in the protective controversy. And in regard to this, fortunately, we have good, if not complete, information.

The duty on pig iron had been 62½ cents a hundred-weight under the tariff act of 1828. In 1832, it was reduced to 50 cents, or \$10 per ton. This rate was equivalent to about 40 per cent. on the foreign price at

\* The growth of foreign trade under the tariffs of 1846 and 1857 was certainly very striking. In Grosvenor's *Does Protection protect?* p. 60, there is a table showing the imports and exports per head of population from 1821 to 1869, in which it is stated that the annual average per head of population was :

	Imports.	Exports.
In 1843-46,	\$4.66	\$5.22
" 1847-50,	6.35	6.32
" 1851-55,	9.10	7.35
" 1856-60,	10.41	9.45

The imports and exports were, in millions of dollars :—

	Imports.	Exports.
Annual average of the four years 1843-46,	92.7	100.
" " " " " 1847-50,	138.3	136.8
" " " " five " 1851-55,	231.	186.2
" " " " " 1856-60,	305.	278.2

But how are we to measure the share which low duties had in promoting this growth?

that time; and, under the Compromise Act of 1833, it was gradually reduced, until it reached 20 per cent. in 1842. Under the act of 1842, the duty was again raised to \$10 a ton. In 1846 it was made 30 per cent. on the value, and in 1857 24 per cent. As the value varied, the duty under these acts, of course, also varied. In 1847, a time of high prices, the duty of 30 per cent. was equal to \$5.75 per ton; in 1852, it was only \$3.05; in 1855, it was as high as \$6; in 1860, it again fell to \$3.40.\*

The duty on bar iron was of two kinds until 1846,—a duty on hammered bar iron, and another heavier duty on rolled bar iron. The duty on hammered bar was in 1832 fixed at 90 cents per hundred-weight, or \$18 per ton. That on rolled bar was nearly twice as heavy, being \$30 per ton, or nearly 100 per cent. on the value. These duties were reduced under the Compromise Act; and, as we have seen, the reduction on rolled bar was very great, and, in 1842, very sudden. Under the act of 1842, the duty on hammered bar was made \$17 per ton, that on rolled bar \$25 per ton. The act of 1846 gave up finally the discrimination between the two kinds, and admitted both alike at a duty of 30 per cent.; and the act of 1857 admitted them at 24 per cent.†

\* The duty from year to year, on the average, for the fiscal years ending June 30, is given in the following table. The foreign value, on which the duty was computed, is also given. The figures are compiled from the tables given in French, *History of Iron Manufacture*, p. 70, and in the *Report of the Iron and Steel Association* for 1876, p. 182.

Year ending June 30.	Average value.	Duty (30% till 1857, 24% after 1857).
1847,	\$19.90	\$5.95
1848,	15.80	4.75
1849,	13.30	4.00
1850,	12.70	3.80
1851,	12.60	3.75
1852,	10.20	3.05
1853,	13.40	4.00
1854,	18.00	5.40
1855,	20.00	6.00
1856,	19.80	5.95
1857,	19.50	5.85
1858,	17.60	4.20
1859,	15.20	3.65
1860,	14.10	3.40

† Between 1832 and 1842, an exception had been made for one class of rolled iron,—iron rails actually laid down on railroads. These were admitted

For the understanding of the effect of the duties, it will be necessary to refer to the tables in the Appendix, of the production and importation of iron. As will be seen from the explanations in the notes to that table, the statistics are by no means completely trustworthy; but they enable us to draw some general conclusions.

It seems to be pretty clear that the importation of iron was somewhat affected by the tariff. The years before 1842, when the compromise tariff was in force, were years of such disturbance that it is not easy to trace any effects clearly to the operation of the tariff; but imports during these years were a smaller proportion of the total consumption of iron than they were during the period after 1846. It must be remembered that from 1830 till 1842 all railroad iron was admitted free of duty, and that a large part of the imported iron consisted of rails. If this quantity be deducted from the total import, the remaining quantity, which alone was affected by the duties, becomes still smaller as compared with the domestic product. In 1841 and 1842, when duties began to be low under the operation of the Compromise Act, imports were larger in proportion to the home product. On the other hand, in the four years, 1843-46, under the act of 1842, they show a distinct decrease. After 1847, they show as distinct an increase, and continue to be large throughout the period until 1860. In the speculative and railroad-building years, from 1852 to 1857, the importation was especially heavy; and in 1853 and 1854 the total quantity of iron imported was almost as great as the home product.

The most effective part of the iron duties until 1846 was the heavy discriminating duty on rolled bar iron. That duty amounted (from 1818 till 1846, except during a few months in 1842) to about 100 per cent. Rolled

free of duty; or, rather, a drawback was granted of the full amount of duty due or paid on them. Between 1828 and 1832, a drawback had been granted such as to make the duty on railroad iron only 25 per cent. After 1842, however, it was charged with duty like any other iron.

iron, made by the puddling process and by rolling, is the form of bar iron now in common use. The process was first applied successfully by Cort in England about 1785, and in that country was immediately put into extensive use. It made bar iron much more cheaply and plentifully than the old process of refining in a forge and under a hammer; and, at the present time, hammered bar of the old-fashioned kind has ceased to be made, except in comparatively small quantities for special purposes. Cort's processes of puddling and rolling were possible only through the use of bituminous coal and coke. The abundant and excellent coal of Great Britain gave that country an enormous advantage in producing rolled iron, as it had already done in smelting pig iron, and put her in that commanding position as an iron producer which she continues to occupy to the present day. When rolled iron first began to be exported from England to foreign countries, it aroused strong feelings of jealousy, being so much cheaper than other iron. Several countries fought against the improvement by imposing discriminating duties on it.\* That course was adopted in the United States. In 1818, a discriminating duty was put on rolled iron, partly because it was said to be inferior in quality to hammered iron, and partly from a feeling in favor of protecting the domestic producers of hammered iron. The duty was retained, as we have seen, till 1846. Its effect was neutralized in part by the free admission of railroad iron, which was one form of rolled iron; but, so far as it was applied to rolled iron in general, it simply prevented the United States from sharing the benefit of a great improvement in the arts. It had no effect in hastening the use of the puddling and rolling processes in the country. Though introduced into the United States as early as 1817, these

\* In France, a discriminating duty equivalent to 120 per cent. was imposed in 1822 on iron imported by sea; i.e., on English iron. Amé, *Tarifs de Douanes*, i. pp. 144-148. The discrimination was maintained until 1855. *Ibid.*, p. 271.

processes got no firm hold until after anthracite coal began to be used, about 1840, as an iron-making fuel.\*

We turn now to the history of the domestic production. By far the most important event in that history is the use of anthracite coal as a fuel, which began about 1840. The substitution of anthracite for wood (charcoal) revolutionized the iron trade in the United States in the same way as the use of bituminous coal (coke) had revolutionized the English iron trade nearly a century before. Up to 1840, pig iron had been smelted in this country with charcoal, which was an expensive fuel, and tended to become more and more expensive as the nearer forests were cut down and wood became less easily attainable. Charcoal pig iron could not have competed on even terms with the coal-made English iron. But between 1830 and 1840 it was protected by the heavy duties on English iron; and, under their shelter, the production in those

\*The first puddling and rolling mill in the United States was put up in Pennsylvania in 1817. The first puddling in New England was done as late as 1835. Wood was used as fuel at the outset. Swank, *Iron in All Ages*, pp. 166, 330. The effect of the duty on rolled iron cannot be better described than in the clear and forcible language used by Gallatin in 1831: "It seems impracticable that iron made with charcoal can ever compete with iron made from bituminous coal. . . . A happy application of anthracite coal to the manufacture of iron, the discovery of new beds of bituminous coal, the erection of iron works in the vicinity of the most easterly beds now existing, and the improved means of transportation, which may bring this at a reasonable rate to the seaboard, may hereafter enable the American iron-master to compete in cheapness with foreign rolled iron in the Atlantic districts. On those contingencies the tariff can have no effect. To persist, in the present state of the manufacture, in that particular competition, and for that purpose, to proscribe the foreign rolled iron, is to compel the people for an indefinite time to substitute a dear for a cheap article. It is said that the British iron is generally of inferior quality: this is equally true of a portion of that made in America. In both cases, the consumer is the best judge,—has an undoubted right to judge for himself. Domestic charcoal iron should confine itself to a competition with the foreign iron made from the same fuel." Gallatin added, prophetically, "Your memorialists believe that the ultimate reduction of the price of American iron to that of British rolled iron can only, and ultimately will, be accomplished in that Western region which abounds with ore, and in which are found the most extensive formations of bituminous coal." *Memorial of the Free Trade Convention*, pp. 60, 61.

years steadily increased.\* There seems to be no doubt that, with lower duties or no duties at all, the domestic production would have been less, and the imports greater. In other words, the duty operated as a true protective duty, hampering international trade and increasing the price of the home product as well as of the imported iron.

In 1840, however, anthracite coal began to be applied to the making of pig iron. The use of anthracite was made possible by the hot blast,—a process first put in successful operation in England, and then transferred to this country by persons who had seen it in England.† The importance of the new method was immediately appreciated, and predictions were made that henceforth there would be no longer occasion for importing iron, even under the 20 per cent. duty of the Compromise Act. Many furnaces were changed from the charcoal to the anthracite method.‡ At very nearly the same time, as it happened, the tariff act of 1842 was passed, imposing heavy duties on all kinds of iron, among others on the railroad iron which had hitherto been admitted free. Very shortly afterwards, a general revival of trade set in. Under the influence of these combined causes, the production of iron was suddenly increased. Between 1842 and 1847, it is said to have more than doubled. Some part of this great increase was certainly due to the high protection of 1842; but, under any circumstances, the use of anthracite would

\* The reader will bear in mind what was said in a previous note on the unsatisfactory character of the statistics.

† The hot blast was successfully applied in a furnace in Pennsylvania in 1836, but the experiment was not prosecuted. In 1837, Crane applied it in Wales, and from his works the process was transplanted to this country. Swank, *Iron in All Ages*, pp. 268-273; French, *History of the Iron Trade*, pp. 58-60. It is striking that the greatest improvements in the iron trade—the use of coke, the puddling and rolling process, the use of anthracite, and in our own time the Bessemer process—all had their origin in England, and thence were transferred to other countries.

‡ See the notices in Hazard's *Statistical Register*, i. pp. 335, 368; iii. p. 173; iv. p. 207. That great results were at once expected from the new method is shown by an interesting speech of Nicholas Biddle's, *ibid.*, ii. p. 230.

have given a great stimulus to the iron trade. This is shown by the course of events under the tariff acts of 1846 and 1857. The production remained, on the whole, very steady throughout the years when these acts were in force. For a few years after the passage of the act of 1846, the reduction of the duty to 30 per cent. had little, if any, effect. Prices were high both in England and in the United States, for it was a time of active railroad building in England, and consequently of great demand for iron. The ad valorem duty was correspondingly high. In 1850-51, the usual reaction set in, prices went down, production decreased, and the iron-masters complained.\* But the natural revival came after a year or two. Prices rose again; production increased, and continued to increase until 1860. Although the duty, which had been \$9 a ton under the act of 1842, was no more than \$3 and \$4 under the 24 per cent. rate which was in force during the years 1858, 1859, and 1860, and although these were not years of unusual general activity, the domestic production showed a steady growth. The country was growing fast, many railroads were in course of construction, much iron was needed. An undiminished home product was consumed, as well as largely increased imports.

The most significant fact in the iron trade, however, is to be seen, not in the figures of total production, but in the shifting from charcoal to anthracite iron. While the total product remained about the same, the component

\* The iron-masters admitted that the act of 1846 had been sufficiently protective when first passed. But in 1849 and 1850 they began to complain and ask for higher duties. See *Proceedings of Iron Convention at Pittsburg* (1849), p. 9; *Proceedings of Convention at Albany*, pp. 27, 42. They certainly had a legitimate subject for complaint in the operation of the ad valorem duty, in that it tended to exaggerate the fluctuations of prices. When prices abroad were high, the duty was high; when prices abroad were low, the duty was low. Consequently, the price of foreign iron in the United States, which is the sum of the foreign price and the duty, fluctuated more widely than the foreign price alone. This was certainly an evil, especially with an article whose price was liable under any conditions to vary so much as the price of iron. See the table, p. 325.

elements changed greatly. The production of anthracite iron rose steadily: that of charcoal iron fell as steadily. The first anthracite furnace was built in 1840. In 1844 there were said to be twenty furnaces, making 65,000 tons annually.\* Thence the production rose with hardly an interruption, being

In 1844,	. . . . .	65,000 gross tons.		
" 1846,†	. . . . .	110,000	"	"
" 1849,	. . . . .	115,000	"	"
" 1854,	. . . . .	308,000	net	"
" 1855,	. . . . .	343,000	"	"
" 1856,	. . . . .	394,000	"	"

As the anthracite iron production increased, that of charcoal iron decreased. Under the tariff act of 1842, a large number of new charcoal furnaces had been put up.‡ Many of these had to be given up under the combined competition of anthracite and of English iron. Some maintained themselves by using coke and raw bituminous coal, in those parts of the country where bituminous coal was to be had; § others disappeared. That some of them,

\* See a *Letter of the Philadelphia Coal and Iron Trade to the Committee on Finance* (pamphlet, Philadelphia, 1844).

† The figure for 1846 is that given in Taylor, *Statistics of Coal*, p. 133. Swank gives the figure for 1846 as 123,000 (gross?) tons; *Iron in All Ages*, p. 274. The figures for 1849-56 are from Lealey, *Iron Manufacturers' Guide* (1859), pp. 751, 752. Those given by Grosvenor, *Does Protection protect?* p. 225, vary somewhat; but the differences are not great.

‡ See the figures in Grosvenor, p. 215. There were built in 1843 9 charcoal furnaces; in 1844, 23; in 1845, 35; in 1846, 44; in 1847, 34; in 1848, 28; in 1849, 14.

§ The use of coke began in the United States about 1850, but was of little importance until after 1856. The use of raw bituminous coal was introduced about 1850 in the Shenango and Mahoning valleys (on the border between Pennsylvania and Ohio), where there is suitable coal. Swank, *Iron in All Ages*, pp. 281-284. In the *Report of the American Iron and Steel Association* for 1876 (prepared by Swank), the following figures are given of the production of iron with the various kinds of fuel. I have selected a few typical years:—

Year.	Anthracite iron.	Charcoal iron.	Bituminous coal and coke iron.	Total.
1854	337,000	342,000	55,000	736,000
1856	443,000	370,000	70,000	883,000
1858	362,000	285,000	58,000	705,000
1860	519,000	278,000	122,000	919,000

The figures here denote net tons. The figures of production of the table on p. 381 denote gross tons, whence an apparent discrepancy

at least, should disappear, was inevitable. Charcoal iron for general use was a thing of the past; and the effect of the tariff of 1842 was to call into existence a number of furnaces which used antiquated methods, and before long must have been displaced in any event by anthracite furnaces.

The use of anthracite not only stimulated the production of pig iron, but also that of rolled iron and railroad bars. Anthracite was first used in puddling and reheating in 1844 and 1845,\* and thenceforward rolled iron was made regularly in large quantities. In 1856, the production of rolled iron was nearly 500,000 tons.† Iron rails first began to be made while the tariff act of 1842 was in force, though the steps towards making them were taken even before that act put an end to the free admission of English rails.‡ With the decline in railroad building and the general fall in iron prices, which took place in 1849, many of the rail mills stopped work. But the business revived with the general prosperity which set in early in the decade, and the production of rails steadily increased until 1856. Under the influence of the crisis of 1857, it fell, but soon rose again, and in 1860 was more than 200,000 tons.§

To sum up: The high duty on iron in its various forms between 1832 and 1841, and again in 1842-46, impeded importation, retarded for the United States that cheapening of iron which has been one of the most important

\*Speech of A. S. Hewitt, in *Proceedings of Iron Convention at Albany* (1849), p. 54.

† Lealey, *Iron Manufacturers' Guide*, p. 761.

‡ See a pamphlet, *Observations on the Expediency of Repealing the Act by which Railroad Iron is released from Duty*, 1842. It gives an account of large rolling mills then being erected at Danville, Pennsylvania.

§ See the figures given in *Report of Iron and Steel Association* for 1876, p. 165. The production of rails is there stated to have been:—

In 1849,	. . . . .	24,000 tons.
" 1850,	. . . . .	44,000 "
" 1854,	. . . . .	108,000 "
" 1856,	. . . . .	180,000 "
" 1857,	. . . . .	162,000 "
" 1860,	. . . . .	205 000 "

factors in the march of improvement in this century, and maintained in existence costly charcoal furnaces long after that method had ceased in Great Britain to be in general use. The first step towards a vigorous and healthy growth of the iron industry was in the use of anthracite in 1840. That step, so far from being promoted by the high duties, was taken in a time when duties were on the point of being reduced to the 20 per cent. level. Hardly had it been taken, when the high duties of the tariff act of 1842 brought about (not indeed alone, but in conjunction with other causes) a temporary return to the old charcoal process. A number of new charcoal furnaces were built, unsuited to the industry of the time and certain to succumb before long. Under the lower duties from 1846 to 1860, the charcoal production gradually became a less and less important part of the iron industry, and before the end of the period had been restricted to those limits within which it could find a permanent market for the special qualities of its iron.\* On the other hand, the lower duties did not prevent a steady growth in the making of anthracite iron; while the production of railroad iron and of rolled iron in general, also made possible by the use of anthracite, showed a similar steady progress. There is no reason to doubt that, had there been no duty at all, there would yet have been a large production of anthracite pig and rolled iron. Meanwhile, the country was rapidly developing, and needed much iron. The low duties permitted a large importation of foreign iron, in addition to a large domestic production. The comparative cheapness and abundance of so important an industrial agent could not have operated otherwise than to promote material prosperity.

\* Charcoal iron has qualities which cause a certain quantity of it to be in demand under any circumstances. Since it settled down, about 1860, to its normal place as a supplement to coal-made iron, the product has steadily increased with the growing needs of the country. In the years 1863-65, the annual product was about 240,000 tons. In 1886, it was 400,000 tons.

We turn now to another industry,—the manufacture of cotton goods, by far the largest and most important branch of the textile industry. Here we are met at the outset by the fact that, at the beginning of the period which we are considering, the cotton manufacture was in the main independent of protection, and not likely to be much affected, favorably or unfavorably, by changes in duties. Probably as early as 1824, and almost certainly by 1832, the industry had reached a firm position, in which it was able to meet foreign competition on equal terms.\* Mr. Nathan Appleton, who was a large owner of cotton factory stocks, and certainly a good judge, and who was also one of the ablest and most prominent advocates of protective duties, said in 1833 that at that date coarse cottons could not have been imported from England if there had been no duty at all, and that even on many grades of finer goods competition was little to be feared. In regard to prints, the American goods were, quality for quality, as cheap as the English, but might be supplanted, in the absence of duties, by the poorer and nominally cheaper English goods,—an argument, often heard in our own day, which obviously puts the protective system on the ground of regulating the quality of goods for consumers. The general situation of the cotton manufacture, as described by Appleton, was one in which duties had ceased to be a factor of much importance in its development.†

During the extraordinary fluctuations of industry and the gradual reduction of duties which ensued under the compromise tariff of 1833, the cotton manufacture was profitable and expanded, or encountered depression and loss, in sympathy with the industry of the country at large, being influenced chiefly by the expansion of credit and the rise of prices before 1837 and 1839, and the crisis

\* See the present writer's essay on *Protection to Young Industries*, Part III., where an account is given of the history of the cotton manufacture up to 1824.

† See Appleton's speech on the Verplanck bill of 1833, *Congressional Debates*, ix. pp. 1216, 1217. Compare his remarks in the same volume at p. 1579.

and liquidation that followed those years. Notwithstanding the impending reductions of duty under the Compromise Act, large investments were made in the business in the earlier part of the period. Thus, in 1835-36, the Amoskeag Company began on a large scale its operations in Manchester, New Hampshire.\* The depression at the close of the decade checked growth for a while, but did not prevent new investments from being made even before the passage of the act of 1842 settled the tariff uncertainty.† The best informed judges said that the causes of increase or decrease of profit had been, as one might expect, the same as those that produced fluctuations in other branches of business; and they made no mention of duties or of tariff.‡ Appleton's account of the stage reached by the industry finds confirmation in a careful volume on the cotton manufacture in the United States, published in 1840 by Robert Montgomery. This writer's general conclusions are much the same as those which competent observers reach for our own time. Money wages were about twice as high in the United States, but the product per spindle and per loom was considerably greater. The cotton in his time was not so well mixed, not so thoroughly cleaned, not so well carded in the United States as in England; but, on the other hand, the Americans were superior in ordinary power-loom weaving, as well as in warping and dressing. Elaborate tables are

\* Potter, *History of Manchester*, p. 552. The Stark Mills were built in 1838, the second Stark Mills in 1839.

† Earl, *History of Fall River*, pp. 35-37. "From the panic of 1837, which affected every business centre in the country, Fall River seems to have speedily recovered, since within a few years from that date nearly every mill in the place was enlarged, though only one new one was built." *Ibid.*, p. 53.

‡ See the answers to circulars sent out in 1845 by Secretary Walker from T. G. Cary, treasurer of a Lowell mill, and from Samuel Batchelder. The latter, our most trustworthy informant on the early history of the cotton manufacture, writes that "the increase and decrease of profit from 1831 to 1844 have conformed very nearly to the general prosperity of the country." The circulars and answers are printed in the appendices to Walker's Report, *Exec. Doc.*, 1845-46, vol. ii., No. 6, pp. 215, 216, 313.

given of the expenses per unit of product in both countries, the final result of which, when all things were considered, showed a difference of three per cent. in favor of the American manufactures. Calculations of this kind, which are common enough in discussions of protective duties, are apt to express inadequately the multiplicity of circumstances which affect concrete industry; yet they may gauge with fair accuracy the general conditions, and in this case were made intelligently and without bias. It is worth noting that Montgomery attributes the success of the Americans in exporting cottons to greater honesty in manufacturing and to the superior quality of their goods.\*

During the years following the passage of the act of 1842, by which the duties on cottons were increased largely, the manufacturers made high profits. In Secretary Walker's Report, and in other attacks on protective duties, much was made of this circumstance, the high profits being ascribed to the new duties. The protectionists denied the connection, and a lively controversy ensued.† The truth seems to be that the case was not different from that usually presented in economic phenomena,—several causes combined to produce a single general effect. The high duties very likely served, in

\*See Montgomery's *Cotton Manufacture*, pp. 29, 38, 82, 86, 91, 101. The tables of expenses are on pp. 124, 125; the remarks on quality of goods, on pp. 130, 194; on wages and product, on pp. 118–121, 123. Montgomery was superintendent of the York Factories at Saco, Maine, of which Samuel Batchelder was treasurer. Allusions to Montgomery's book, and confirmation of some of his conclusions, may be found in Batchelder's *Early Progress of the Cotton Manufacture*, pp. 88 and following.

At a convention in favor of protection, held in New York in 1842, committees were appointed on various industries. The committee on cottons reported a recommendation to Congress of minimum duties on plain and printed goods, but added that these duties were "more than is necessary for much the largest part of the cotton goods," and that "most of the printed calicoes are now offered to the consumer at lower prices than they could be imported under a tariff for revenue only."

†See T. G. Cary, *Results of Manufactures at Lowell*, Boston, 1845; N. Appleton, *Review of Secretary Walker's Report*, 1846; and the speeches of Rockwell, *Congr. Globe*, 1845–46, pp. 1034–1037, and Winthrop, *ibid.*, Appendix, p. 969.

part, to enable a general advance of profits to be maintained for several years. But there was also an increased export to China, which proved highly profitable. Moreover, the price of raw cotton was low in these years, lagging behind the advance in the price of cotton goods; and, as long as this lasted, the manufacturers made large gains. The fact that prosperity was shared by the cotton manufacturers in England shows that other causes than the new tariff must have been at work.

On the other hand, when the act of 1846 was passed, the protectionists predicted disaster;\* but disaster came not, either for the country at large or for the cotton industry. Throughout the period from 1846 to 1860 the manufacture of cottons grew steadily, affected by the general conditions of trade, but little influenced by the lower duties. Exact figures indicating its fortunes are not to be had, yet we have enough information to enable us to judge of the general trend of events. The number of spindles in use gives the best indication of the growth of cotton manufacturing. We have no trustworthy figures as to the number of spindles in the whole country; but we have figures, collected by a competent and well-informed writer, in regard to Massachusetts. That State has always been the chief seat of the cotton manufacture, and its progress there doubtless indicates what took place in the country at large. The number of spindles in Massachusetts, which was, in round numbers, 340,000 in 1831, had nearly doubled in 1840, was over 800,000 in 1845, and was over 1,600,000 in 1860, having again nearly doubled during the period of low duties.† The same signs of growth and prosperity are seen in the figures of the consumption of raw cotton in the United States, which,

\* Abbott Lawrence predicted in 1846 that "all this [a general crash] will take place in the space of eighteen months from the time this experimental bill goes into operation; not a specie-paying bank doing business will be found in the United States." *Letters to Rives*, p. 12. Appleton made a similar prediction in his *Review of Walker's Report*, p. 28.

† The following figures are given by Samuel Batchelder in a *Report to the*

compiled independently, reach the same general result. Between the first half of the decade 1840–50, and the second half of the decade 1850–60, the quantity of raw cotton used in the mills of the United States about doubled. The annual consumption, which had been about 150,000 bales in 1830, rose to an average of more than 300,000 bales in the early years of the next decade, and again to one of more than 600,000 bales in the years 1850–54. In the five years immediately preceding the civil war, the average annual consumption was about 800,000 bales. During these years the consumption of cotton in Great Britain seems to have increased at very nearly the same rate.\* Such figures indicate that the cotton manufacture was advancing rapidly and steadily. Another sign of its firm position is the steady increase during the same period in the exports of cotton goods, chiefly to China and the East. The value of the cotton goods exported averaged but little over \$3,000,000 annually between 1838 and 1843, rose to over \$4,000,000 between 1844 and 1849, was nearly \$7,000,000 a year between 1851 and 1856, was over \$8,000,000 in 1859, and almost touched \$11,000,000 in 1860. An industry which regularly exports a large part of its products can hardly be stimulated to any considerable extent by protective

*Boston Board of Trade*, made in 1860 (published separately; the essential parts printed also in *Hunt's Merchants' Magazine*, xlv. p. 14):—

Spindles in Massachusetts:—	
In 1831, . . . . .	340,000
" 1840, . . . . .	624,500 (other sources make it 665,000)
" 1845, . . . . .	817,500
" 1850, . . . . .	1,238,000
" 1855, . . . . .	1,519,500
" 1860, . . . . .	1,688,500

For New England, and the United States as a whole, Batchelder gives the following figures, taken from De Bow, for the years 1840 and 1850. They are not entirely trustworthy, but may be accepted as roughly accurate. We add the census figures for 1860:—

	Spindles in	
	New England.	United States.
1840, . . . . .	1,597,000, . . . . .	2,112,000
1850, . . . . .	2,751,000, . . . . .	3,634,000
1860, . . . . .	3,859,000, . . . . .	5,236,000

\*The reader is referred to the Appendix to this number, for tables of the consumption of cotton and of the exports of cotton goods.

duties. No doubt, the absence of high duties had an effect on the range of the industry. It was confined mainly to the production of plain, cheap, staple cotton cloths, and was not extended to the making of finer and "fancy" goods. But, even under the high protective duties of the last twenty-five years, the bulk of the product has continued to be of the first mentioned kind, and cottons of that grade have been sold, quality for quality, at prices not above those of foreign goods; while comparatively little progress has been made in the manufacture of the finer grades.\*

The situation of the woollen manufacture differs in some important respects from that of the cotton manufacture, most noticeably in that it is less favorable as regards the supply of raw material. The maker of cotton goods is sure of securing at home cotton of the best quality at a price below that which his foreign rival must pay. But many qualities of wool cannot be produced to advantage in the United States; while others cannot be grown at all, or at least, notwithstanding very heavy protective duties, have not been grown in fact. Moreover, the raw material,

\*Batchelder, who was a decided advocate of protection, wrote in 1861 a series of articles for the *Boston Commercial Advertiser*, in which, after comparing the prices and qualities of English and American shirtings, he said: "The inquiry may then be made, What occasion is there for a protective duty? The answer is: There would be none in the ordinary course of business. But there are sometimes occasions when . . . there has been a great accumulation of goods in the hands of manufacturers abroad, so that, if crowded on their market, it would depress the price of the usual supply of their customers at home. On such occasions, our warehouse system affords the opportunity, at little expense, to send the goods here, where they may be ready to be thrown on the market to be sold," etc.

In Ellison's *Handbook of the Cotton Trade* (1858), it is said, at p. 29: "It is believed that, had it not been for the free-trade policy of Great Britain, the manufacturing system of America would at the present time have been much more extensive than it is; but the spinners and manufacturers of Lancashire can as yet successfully compete with those of Lowell, though for how long a time remains to be seen, for the latter are yearly gaining experience and improving their machinery, so that before long they will be able to compete with the old country, more especially should the executive [sic] abolish the present protective system adopted with respect to the import of cotton manufactures."

when obtained, is neither so uniform in quality nor so well adapted to treatment by machinery as is the fibre of cotton. Wool is of the most diverse quality, varying from a fine silk-like fibre to a coarse hairy one. A process of careful sorting by hand must therefore be gone through before manufacture can begin. In some branches of the industry, the qualities of the fibre, and those of the goods which are to be made from it, call for more of manual labor, and admit in less degree of the use of machinery, than is the case with cottons; and it is a familiar fact, though one of which the true meaning has not often been grasped, that a need of resorting to direct manual labor in large proportion and a difficulty in substituting machinery, constitute, under conditions of freedom, an obstacle to the profitable prosecution of an industry in the United States.\* But, on the other hand, certain qualities of wool are grown to advantage in the climate of this country and under its industrial conditions, especially strong merino wools of good though not fine grade, of comparatively short staple, adapted for the making of flannels, blankets, and substantial cloths. At the same time, machinery can be applied to making these fabrics with less difficulty than to the manufacture of some finer goods.

Our information in regard to the history of the woollen manufacture is even more defective than that on iron and cottons. For the period between 1830 and 1840, we have no information that is worth anything. In 1840, the industry was confined to making satinets (a substantial, inexpensive cloth, not of fine quality), broadcloths, flannels, and blankets.† The tariff act of 1842 imposed on woollen goods a duty of 40 per cent., and on wool one of three cents a pound plus 80 per cent. on the value. It is said that during the four years in which these

\* I reserve for another occasion a full discussion of this interesting and important phase of the international trade of the United States.

† See a passage quoted from Wade's *Fibre and Fabric* in the Bureau of Statistics *Report on Wool and Manufactures of Wool*, 1887, p. xlvii.

rates were in force a stimulus was given to the making of finer qualities of broadcloths, the development being aided by evasions of the ad valorem duty on wool.\* The act, however, did not remain in force long enough to make it clear what would have been its permanent effect on the woollen manufacture. Whatever may have been the start made in these few years in making finer woollens, this branch of the industry, as is generally admitted, well-nigh disappeared under the duties of 1846. The act of that year imposed a duty of 80 per cent. on woollen goods in general; but flannels and worsteds were admitted at 25 per cent., and blankets at 20 per cent. On wool, also, the duty was 80 per cent. Under this arrangement of duties, — whether or not in consequence of it, — no development took place in those branches of the manufacture which needed wool that was subject to the 80 per cent. duty. The finest grades of woollens were not made at all. But the manufacture of cloths of ordinary quality (so-called cassimeres and similar goods), and that of blankets and flannels, continued to show a regular growth. The census figures are not of much value as accurate statistics, but there seems no reason for doubting that they prove a steady advance in the woollen manufacture as a whole.† The growth was confined mainly to those branches which used domestic wool; but within these there was not only increase, but development. The methods of manufacture were improved, better machinery was introduced, and new kinds of goods were made.‡ It

\* Grosvenor, *Does Protection protect?* p. 147; Introduction to the volume of the *Census of 1860 on Manufactures*, p. xxxiii.

† The census figures on the woollen manufacture are: —

	Capital (in million dollars).	Value of Product	Hands employed.
1840,	15.7	20.	21,342
1850,	26.1	43.5	34,895
1860,	30.8	61.9	41,360

The figures for 1850 are exclusive of those relating to blankets; for 1860, are exclusive of those relating to worsteds.

‡ "Eighteen hundred and fifty saw the success of the Crompton loom at Lowell and Lawrence, on which were made a full line of Scotch plaids in all

is a striking fact that the very high protective duties which were imposed during the Civil War, and were increased after its close, have not brought the manufacture of woollen goods proper to a stage substantially different from that which had been attained before 1860. The description of the industry which the spokesman of the Association of Wool Manufacturers gave in 1884 is, in the main, applicable to its state in 1860. "The woollen manufacture of this country . . . is almost wholly absorbed in production for the masses. Nine-tenths of our card-wool fabrics are made directly for the ready-made clothing establishments, by means of which most of the laboring people and all the boys are supplied with woollen garments. The manufacture of flannels, blankets, and ordinary knit goods — pure necessities of life — occupies most of the other mills engaged in working up carded wool." \*

Some outlying branches of the woollen manufacture, however, showed a striking advance during the period we are considering. The most noteworthy of these is the carpet manufacture, which received a great impetus from

their beautiful colorings, as well as star twills, half-diamonds. . . . Up to that time, fancy cassimeres had been made largely through the Blackstone Valley (in Rhode Island) on the Crompton and Tappet looms, as made by William Crompton. As early as 1846, the Jacquard was used at Woonsocket and Blackstone. From 1850 to 1860, fancy cassimeres made a rapid advance, and the styles ran to extremes far more than they have ever since." *Wade's Fibre and Fabric*, as quoted above, p. xlviii.

According to the official *Statistical Information relating to Certain Branches of Industry in Massachusetts*, 1855, at pp. 573-575, woollen goods were made in 1855 in that State as follows: —

Broadcloth to the value of . . . . .	\$838,000
Cassimeres to the value of . . . . .	5,015,000
Satinets to the value of . . . . .	2,709,000
Flannels and blankets to the value of . . . . .	3,126,000
Woollen yarns to the value of . . . . .	386,000

\* Mr. John L. Hayes, in the *Bulletin of the Association of Wool Manufacturers*, xiv. p. 116. Mr. Hayes also states the woollen manufacture to be "capable of producing commodities of the highest luxury,—rich carpets, fine upholsteries, and superfine broadcloths"; but his description of other branches of the industry is similar to that quoted in the text on card-wool goods. "The dress goods manufactured are fabricates almost exclusively for the million, the women of the exclusive and fashionable classes supplying themselves mainly

the application of newly invented machinery. The power loom for weaving ingrain carpets was invented in 1841 by Mr. E. B. Bigelow, and the more complicated loom for weaving Brussels carpets was first perfected by the same inventive genius in 1848.\* The new machinery at once put the manufacture of carpets on a firm basis; and, in its most important branches, the manufacture of ingrain and Brussels carpets, it became independent of aid from protective duties. A similar development took place in the manufacture of woollen hose. The knitting frame had been invented in England as early as the sixteenth century, but had been worked only by hand. It was first adapted to machinery in the United States in 1831, and was first worked by machinery at Cohoes in New York in 1832. Other inventions followed; and a prosperous industry developed, which supplied the entire domestic market, and was independent of protective duties.† On the other hand, hardly more than a beginning was made before the Civil War in the manufacture of worsted goods. In 1860 there were no more than three considerable factories engaged in making worsteds, and the imports largely exceeded the domestic product.‡ Some explanation of this state of things may be found in the comparatively low duty of 25 per cent. which worsteds paid under the tariff of 1846. Something was also due to the fact that the worsted industry in England not only was long established, but was steadily improving its methods and

through French importations. The vast carpet manufacture of Philadelphia, larger than in any city of Europe, has its chief occupation in furnishing carpets for the more modest houses."

\* See the sketch of Mr. Bigelow's career, up to 1854, in *Hunt's Merchants' Magazine*, xxx. pp. 162-176.

† See the account of the history of the manufacture of knit goods in the *Census of 1860*, volume on Manufactures, pp. xxxix-xlv. Compare the brief sketch by John L. Hayes in his address on *Protection a Boon to Consumers* (Boston, 1867), pp. 9-11. No attempt had been made before 1860, in the United States or elsewhere, to make knit goods of cotton.

‡ See the Introduction to the volume on Manufactures, *Census of 1860*, pp. xxxvi-xxxix.

From the figures of production in the *Census of 1860*, and from those of

machinery. But the most important cause, doubtless, was the duty of 30 per cent. on the long staple combing wool, which then was needed for making worsted goods, and which physical causes have prevented from being grown to any large extent in the United States.

The greatest difference between the woollen industry as it stands to-day and as it stood before 1860 is in the large worsted manufacture of the present, which has grown up almost entirely since the wool and woollens act of 1867. The high duties undoubtedly have been a cause of this development, or at least were so in the beginning; but a further and important cause has been the great improvement in combing machinery, which has rendered it possible to make so-called worsted goods from almost any grade of wool, and has largely done away the distinction between woollen and worsted goods. The result has been that the worsted makers, as well as the makers of woollens, have been able to use domestic wool; and it is in the production of goods made of such wool that the greatest growth of recent years has taken place.

The tariff act of 1857 reduced the duty on woollens to 24 per cent., but much more than made up for this by admitting wool practically free of duty. Wool costing less than twenty cents at the place of exportation was admitted free, which amounted in effect to the exemption of almost all wool from duty. Moreover, dyestuffs and other materials were admitted free or at low rates. The free admission of wool from Canada, under the reciprocity treaty of 1854, had already been in force for three years.\*

imports in the *Report on Commerce and Navigation* for the fiscal year 1859-60, we have the materials for a comparison of the domestic and the foreign supply of the most important kinds of woollen goods. The figures are:—

	Production, 1860.	Imports, 1859-60.
Woollens generally (including flannels, but not blankets, shawls, or yarns), . . . . .	\$43,500,000	\$13,350,000
Carpets, . . . . .	7,860,000	2,200,000
Worsted, . . . . .	3,700,000	12,300,000

\* Large quantities of combing wool were imported from Canada under the reciprocity treaty, and were used in making worsteds and carpets. In 1866, when the treaty was terminated, and high duties had been imposed on wool in

As might have been expected, these changes served to stimulate the industry; and it grew and prospered during the years immediately preceding the Civil War. A remission of duty on materials obviously operates mainly to the advantage of producers and middle-men in the first instance, and brings benefit to consumers only by a process more or less gradual. The experiment of free wool, with a moderate duty on woollens, was not tried long enough to make certain what would be its final results. But it seems to have had little, if any, effect on the prices of domestic wool;\* it gave a distinct stimulus to the woollen manufacture; and it must have tended at the least to cheapen for the consumer goods made in whole or in part of foreign wool.

It would be possible to extend this inquiry farther,† but enough has been said for the present purpose. In the main, the change in duties has had much less effect on the protected industries than is generally supposed. Their growth has been steady and continuous, and seems to have been little stimulated by the high duties of 1842, and little checked by the more moderate duties of 1846

general, the manufacturers pleaded hard for the continued free admission of Canada wool, though they were active in securing the general high duties of 1867 on wool and woollens. But they did not succeed in getting the Canada wools free. See the *Statement of Facts relative to Canada Wools and the Manufacture of Worsted*s, made by the National Association of Wool Manufacturers, Boston, 1866.

\*The price per pound of medium wool, arranged from quarterly quotations, was:—

	cts.		cts.
In 1852, . . . .	38½	In 1857, . . . .	46
" 1853, . . . .	53	" 1858, . . . .	36
" 1854, . . . .	42½	" 1859, . . . .	47
" 1855, . . . .	38	" 1860, . . . .	47½
" 1856, . . . .	45		

The prices of other grades moved similarly. The panic of 1857 caused a fall in 1858, but in the following year the old level was recovered. The figures are based on the tables of wool prices in the Bureau of Statistics *Report on Wool and Manufactures of Wool*, 1887, p. 109. The movement of wool prices abroad during these years seems to have been about the same.

† In the Introduction to the volume on Manufactures of the *Census of 1860*, to which reference has been made before, there is a useful sketch of the history of various branches of manufacture up to that date.

and 1857. Probably the duties of the last-mentioned years, while on their face protective duties, did not have in any important degree the effect of stimulating industries that could not have maintained themselves under freedom of trade. They did not operate as strictly protective duties, and did not bring that extra tax on consumers which is the peculiar effect of protective duties. The only industry which presents a marked exception to these general conditions is the manufacture of the cruder forms of iron. In that industry, the conditions of production in the eastern part of the United States were such that the protective duties of 1842 caused a return to old processes, and an enhanced price to the country without a corresponding gain to producers. Even under the rates of 1846 and after the use of anthracite coal, the same effect can be seen, though in less degree.

The present situation is not so different as is generally supposed from that which existed before 1860. The manufacture of crude iron in the eastern part of the United States now presents in some degree a case of the effect of a pure protective duty. But at present, as before 1860, the great textile manufactures are not dependent in any considerable degree on protective duties; and the production of crude iron would not be more likely now than then to disappear entirely under moderate duties. No doubt, the growth of manufacturing industries has been greatly stimulated by the high duties which have been maintained since the civil war, and in some cases stimulated beyond the point at which they could maintain themselves without some degree of protection. But experience under the more moderate duties of the earlier period indicates that a steady growth would have taken place in any event. Some branches of manufactures may be dependent on the present high duties, but the bulk of them probably would have reached something like their present position under a much more moderate system.

F. W. TAUSSIG.

## NOTES AND MEMORANDA.

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MR. WORTHINGTON C. FORD has printed, from the Jefferson papers deposited with the Department of State at Washington, a *Report of the Committee of Lords of the Privy Council on the Trade of Great Britain and the United States*. The document, which is dated 1791, and was prepared for use in the negotiations for regulating the intercourse between the two countries, contains much interesting and valuable matter on our early economic history. Mr. Ford has appended to it the bills introduced in Parliament in 1783 for regulating the trade with the United States.

A great mass of unpublished material of this kind is contained in the Jefferson and Hamilton papers. Among the Hamilton papers, for example, is the correspondence on which Hamilton based his *Report on Manufactures*. Secretary Bayard has approved the project of publishing these documents, under the editorship of Mr. Ford. It remains to be seen whether Congress will make the necessary appropriations.

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A FURTHER development of the system of compulsory insurance has taken place in the passage, on December 28, 1887, of an Austrian act for insurance against accident. The Austrian legislation, while following in its main lines that of Germany, differs in some respects. The most important difference is that the insuring associations are not organized by occupations, but by geographical districts. Instead of the German *Berufsgenossenschaften*, associations are to be established, in general, in each of the countries of which Austria is made up, and are to be conducted under government superintendence. Again, the membership is not made up as in Germany of employers only, but of both employers and employees;

and contributions are to be paid by both classes. This seems, however, to be more a nominal than a real difference; for employees pay only ten per cent. of the contributions, or premiums, and their influence in management is not likely to be great. Danger tariffs are to be arranged, as in Germany, for assessing the contributions in proportion to the varying probability of accident in different occupations. The indemnities follow the German model, and include expenses of cure, pensions in case of permanent disability, and, in case of death, pensions to the widow, children, or other dependent persons. The act applies to workmen in factories, iron-works, mines, to those engaged in building operations, and to apprentices. It does not affect sailors, railroad men, or public employees.

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Among recent changes in the staffs of the German universities, we note that Professor Brentano has accepted a call to Vienna, and has resigned his position at Strasburg, the resignation to take effect April 1. His place at Strasburg is to be filled by A. Sartorius von Waltershausen, hitherto professor at Zürich, and known to American students by his writings on our social problems. We note also that W. Hasbach, hitherto professor extraordinary at Greifswald, is to go to Königsberg in the same capacity.

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In order to exhibit clearly the extent and nature of the accumulation of cash by the Treasury of the United States, the following table has been compiled from the monthly statements, showing in a condensed arrangement the state of the Treasury at four dates. It will be seen that, in the last year, just about one half of the accumulation of cash caused by the surplus of revenue has been added to the government deposits in banks. The large increase in the holding of gold is to a great extent offset by the diminution in net silver, this being cut down by the extended use of silver certificates. In this respect then the movement is partly absorption and partly substitution of silver for gold in general circulation.

The amounts are given in millions and tenths of millions.

	April 1, 1886.	April 1, 1887.	Dec. 1, 1887.	April 1, 1888.
<b>CASH.</b>				
Gold, - - - -	242.2	276.0	302.7	310.8
Less Certificates, - -	90.8	94.1	90.8	92.0
	<u>151.4</u>	<u>181.9</u>	<u>211.9</u>	<u>218.8</u>
Silver, - - - -	177.0	206.4	219.9	235.4
Less Certificates, - -	90.1	131.9	168.1	191.5
	<u>86.9</u>	<u>74.5</u>	<u>51.8</u>	<u>43.9</u>
U.S. Notes, - - - -	42.2	28.3	23.1	33.1
Less Certificates, - -	11.9	7.1	6.8	8.9
	<u>30.3</u>	<u>21.2</u>	<u>16.3</u>	<u>24.2</u>
Trade Dollars, bullion, -		3.9	6.8	6.6
Bank Notes, - - - -	.2	.2	.1	.3
Deposited in Banks, -	13.8	19.9	42.4	61.2
	<u>13.8</u>	<u>19.9</u>	<u>42.4</u>	<u>61.2</u>
Total Net Cash, -	<u>282.6</u>	<u>301.6</u>	<u>329.3</u>	<u>355.0</u>
<b>LIABILITIES.</b>				
Matured Debt and Int., -	17.3	34.9	13.5	14.1
Reserve for U.S. Notes, -	100.0	100.0	100.0	100.0
5 % Bank Redemp'n Fund,	10.7	8.9	7.9	7.5
Held to Red. Bank Notes,	49.5	96.9	98.4	91.7
Post-office Account, -	3.8	5.1	3.4	4.5
Disbursing Officers' Acc'ts,	20.3	27.9	44.0	27.0
Assets of Failed Banks, -	.5	.9	1.6	2.3
Treas. Drafts Outstanding,	3.6	4.2	4.6	2.8
Sundries, - - - -	.5	.9	.6	.7
	<u>206.2</u>	<u>279.7</u>	<u>274.0</u>	<u>250.6</u>
<b>FREE CASH, - - - -</b>	<u>76.4</u>	<u>21.9</u>	<u>55.3</u>	<u>104.4</u>

THE Imperial Insurance Bureau has presented to the German Reichstag its report on the working of the system of accident insurance for the year 1886. Sixty-two *Berufsgenossenschaften*, or associations of employees for effecting insurance, were in existence, and insured, in round numbers, 3,473,000 workmen employed in 269,000 establishments. Indemnities were paid for nearly 10,000 cases of accident, to the

amount of 1,712,000 marks. The expenses of the *Berufsgenossenschaften* continue to be large in proportion to their insurance payments. The running expenses for 1886 were 2,824,000 marks, to which must be added 277,000 marks, paid for investigating cases of accident, for arbitration, and for prevention of accidents.

As has already been noted in these pages, the present system of accident insurance has been criticised on the ground that the machinery costs more than its results justify; and there certainly seems to be foundation for this objection, when it costs a mark and a half to pay every mark of indemnity. The system of insurance against sickness, which is managed by the public authorities, makes a much better financial showing. It is possible that the wish to get a larger return for the expensive organization of accident insurance led to the vote passed on December 17th last, at a general meeting of delegates from the *Berufsgenossenschaften*, to the effect that it was expedient, as is proposed by the government bill, that old age insurance should also be carried on by these associations. The vote was 40 to 24, but only 64 out of 95 delegates took part in it.

THE change which the distribution of English agriculture has suffered, under the pressure of altered conditions of the market, is clearly shown by a table given in the *Agricultural Returns of Great Britain* for 1887. The average proportion of acreage under each kind of crop for every thousand acres at three dates is given for Great Britain as follows:—

	1867.	1877.	1887.
	<i>Acres.</i>	<i>Acres.</i>	<i>Acres.</i>
Wheat, . . . . .	189	176	137
Oats, . . . . .	155	153	182
Other corn, . . . . .	178	183	162
Green crops, . . . . .	197	200	204
Clover and grass, . . . . .	224	250	282
Sundries, . . . . .	5	4	4
Fallow, . . . . .	52	34	29
Total of arable land, . . .	1,000	1,000	1,000

The remarkable shrinkage of wheat cultivation and the extension of the space given to oats and grass crops are the

easily recognized results of widened competition for the supply of that product which is transported most economically in proportion to its value.

With respect to the effect on the value of the land, an important paper was read at the meeting of the British Association in September last by Mr. G. Auldjo Jamieson, of Edinburgh, entitled *Recent Illustrations of the Theory of Rent and their Effect on the Value of Land*. Speaking from an experience of unusual extent, especially as regards Scotch properties, Mr. Jamieson says:—

For a time, when first the fall of value came to be recognized, not as an incidental circumstance, but as a permanent economic fact, land was virtually unsalable; but again economic forces asserted themselves, sellers of land came to recognize the fall, prices of land descended, and the inevitable result has begun to follow; . . . and buyers, who a few years ago would never have thought of purchasing land, are now buying, and many more begin to think of it.

As the result of some extensive sales of arable land, Mr. Jamieson finds such property worth, at present, about twenty-eight years' purchase, which is to be compared, not with the thirty years' purchase formerly obtained in the same districts, but with the thirty-three which the land should command, in order to maintain its position relatively to other investments. This fall has been attended, it would seem, by a change in the character of the demand. "The demand for land as a form of investment, though materially reduced in intensity, has decidedly grown in extent." The strong desire to lay field to field has weakened, and "no small part of the land now being sold is being acquired in parcels much smaller than was usual in former times."

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THE favor with which Mr. Goschen's measure for the conversion of the English 3 per cents. is received marks strongly the downward movement of interest on high security. In 1884, Mr. Childers carried through the Debts Conversion Act of that year (47 & 48 Victoria, c. 23), by which holders for every £100 of 3s were offered their choice between £102 of 2½

per cents. and £108 of  $2\frac{1}{2}$  per cents., the new securities being in both cases irredeemable for twenty years.  $2\frac{1}{2}$  per cents. were worth at the time  $92\frac{1}{2}$  to 98; but Mr. Childers's offer, not supported by any threat of reimbursement, brought in only £22,862,596 of 8s, being defeated, it was said, by the influence of the bankers, who generally received it with little favor.

Mr. Goschen is now able to require holders of 8s to choose between their capital and a new security, which falls to  $2\frac{1}{2}$  per cent. in April, 1889, to  $2\frac{1}{2}$  per cent. in April, 1908, and becomes redeemable in April, 1928. The  $2\frac{1}{2}$  per cents., before the measure was introduced, stood at  $95\frac{1}{2}$ , and at 97 after its passage in the House of Commons, with a subsequent decline, however, of about 1 per cent.; and it is suggested that there is now some "searching of heart" among those who imprudently refused Mr. Childers's offer.

The *Economist* of March 17 gives a table showing the immediate rise of price caused in the soundest class of securities by the general belief in the success of Mr. Goschen's operation. A few examples will serve for a comparison with the extreme range of prices reached in 1884, under the temporary impression produced by the scheme of Mr. Childers:—

	Highest in 1884.	Jan. 1, 1888.	March 16, 1888.
Metropolitan Board of Works $3\frac{1}{2}$ s, . . . . .	112	$110\frac{1}{2}$	$114\frac{1}{2}$
Liverpool Corporation $3\frac{1}{2}$ s, . . . . .	105	$106\frac{1}{2}$	$111\frac{1}{2}$
Great Northern Debenture 4s, . . . . .	127	125	133
London & North-western Debenture 4s, . . . . .	128	128	134
Midland Debenture 4s, . . . . .	127	125	133

## GOVERNMENT MONOPOLY vs. PRIVATE COMPETITION.

A year or two ago, the distinguished French publicist, M. Léon Say, delivered an address in London before what may be termed a Personal Rights Convention, in which he called attention to the growing disposition on the part of the inhabitants of all civilized countries to look to their respective governments for the performance of services which, until recently, would have been left undone unless undertaken as the result of individual or corporate energy. The argument advanced by M. Say was, in substance, that it was necessary for the protection of personal rights, on political no less than upon economical grounds, that a stubborn resistance should be made to this popular tendency; for, if not arrested, the movement threatened to be subversive of individual liberty.

It is obvious, however, that this demand springs from a recognition, born of hard experiences, of the impossibility of harmonizing what are believed to be social rights with what are now called the old systems of political economy. A relief from individual and corporate tyranny and from the abuses of private monopoly is sought through the medium of government intervention; and, until some other means can be discovered and applied for the correction of these evils, it is useless to hope that the fast rising tide of public opinion can be turned and put upon its ebb. In the absence, therefore, of an alternative remedy, it would seem to be much the wiser plan to endeavor to control rather than arrest a movement which has gained such large proportions, particularly as there is no civilized country in which the converse theory of government non-intervention has been logically carried out.

The change asked for presents itself, not so much in the form of a revolution as of a demand for the enlargement of existing functions. Already, it is said, the government does, and does tolerably well, many classes of work that might be undertaken by private citizens. Why should it not be permitted to do more of these?

It would seem to be possible to lay down some general rule, which, until some more acceptable formula can be brought

forward, would serve to control the demand for government interference by fixing a limit upon the classes of work which government, either local or national, might reasonably be asked to perform. The rule proposed would take this form: Government may be rightly asked to undertake those services for the efficient or economical performance of which a monopoly is either desirable or necessary; while, contrariwise, government should not interfere in any class of service where the best results are secured by means of competition.

The adoption and application of this test would concede more in both directions than might at the first glance be supposed. With the town and city governments of this country there is no general principle of action. All of these have taken upon themselves duties that might and probably would be performed, but for their intervention, by private enterprise. But these interventions have varied in different localities. Thus the municipal government of Philadelphia supplies its citizens with gas and water, while in San Francisco both water and gas are furnished by private corporations. In New York, Boston, Chicago, and other large American cities, water is a public and gas a private service. But, apparently, no rule has been laid down which would serve to explain why one class of work has been undertaken and the other ignored, or, as to that matter, why both have not been left to private enterprise. But, by applying the formula given above, it is easy to understand not only why these duties come within the scope of government action, but why it would be possible for local governments to enter upon classes of work which they have thus far shown little or no disposition to undertake. One system of water supply is obviously preferable to two, three, or more; for of necessity the mains and pipes laid down in the streets have to be large enough to meet extraordinary demands, such as those of a great fire, and are thus quite adequate to meet ordinary requirements. To duplicate this service would not only involve the annoyance of a useless opening up of the streets, but would in the end compel the consumers of water to pay interest in the water rates upon an unnecessary investment of capital. Competition could by no possibility cut down these rates to as low a figure as it would

be possible to secure by means of a well-managed public monopoly, which had no end in view but the earning of a sufficient income to defray the cost of management and the interest upon the debt, if one was incurred in constructing the works. The same argument, with due allowances, is equally applicable to the proposition that a municipal corporation should undertake the work of manufacturing and supplying its citizens with gas, either for heat or light, although it is held by the civic authorities of Paris that it is a better plan to permit the creation of a private gas monopoly, under strict official supervision, in the profits of which the government is a large participant.

But the plan admits of further extensions. Assuming that the expense to the consumers, or users, will be limited to the interest upon the investment and the cost of well-regulated maintenance, it would be unquestionably cheaper, and hence better, to have local governments engage in the work of supplying from central stations electricity for light and power, and steam for heat and power, and even in that of running street-cars. This may seem to involve radical enlargements of governmental function; but, logically, such increases are quite as defensible as not a few of the services that local governments are now performing. In the case of these latter, it is force of custom, and not variation in function, that makes these seem proper and fitting.

The application of this principle to the State and national governments opens up, as might be supposed, a broader field. It would clearly justify the national government, either with or without the participation of the State governments, in taking control of the telegraph and railroad systems of the country. Whether or not such participation should be admitted is a question which would, if entered into, carry this article to too great a length, and, as it does not trench upon the general theory, need not now be considered. But it will not be denied that if, with an absolute freedom from competition, the telegraph and railroad systems of this country were carried on so as to afford the people the greatest convenience possible in reason, at a cost sufficient to defray the expenses of maintenance, and say three per cent. interest upon their

present value, the community would obtain from them larger benefits than it is now receiving, at a considerable reduction in what it now has to pay.

If a thorough analysis could be made, it would probably be found that the people of this country have lost more than they have gained in consequence of competition between telegraph and railroad lines; and the losses thus far sustained, during the period in which we have been supplying ourselves with these needed facilities, are small compared with what they will be in the future, when competition sets in for a division of the profits in those localities where ample facilities already exist.

The results of telegraph competition are so well known that they hardly need to be more than mentioned. They have led to the absorption of one rival company after another, with their parallel and expensive because unnecessary lines, with at the same time a large interjection of fictitious capital upon which interest has to be earned. But, it may be said, the existing competition is likely to be more permanent because established upon more solid ground. Yet even assuming this, if the rival companies can earn dividends at existing rates, the competition is none the less a loss to the community. In the struggle to obtain business, two or more offices are opened in each city or town where one would amply suffice. Two distinct staffs of officers, operators, and line men have to be maintained; while the work of construction and repairs going on upon two separate but parallel lines is obviously more expensive than if the same number of wires were run and maintained under one system of management. If, on the other hand, dividends are not earned, then it becomes only a question of time when, tacitly or avowedly, some form of consolidation takes place for the establishment of a higher rate of tolls. It would seem, therefore, that the best results were to be obtained by the creation of a telegraph monopoly.

With the railway systems the conditions are more complex; but it is equally susceptible of proof that it would be of advantage to the community if with them competition, in the ordinary sense of the term, could be prevented. Not to take up such flagrant cases of loss to the community as the building of

the West Shore and the Nickel Plate roads, where an inevitable consolidation has already been effected, and where, with no material increase in facilities, interest has to be earned upon a uselessly invested capital, attention may be turned to the ordinary conditions of railroad business,—though parenthetically it may be remarked that experiences similar to those just referred to are likely to be of much more frequent occurrence in the future than they have been in the past. It is probable that, with increased terminal facilities and a few other slight changes, either the New York Central or the Pennsylvania Railroads could transport all of the freight and passengers that are now carried between the North-eastern and the Central-western and North-western States of the Union. Indeed, it is not unlikely that in a generation or two hence each of these roads will do fully that amount of business. If, at the present time, this business was thus consolidated, its transaction would manifestly involve a much smaller expenditure of money than is required by existing conditions.

It may be said in reply to this that, in suggesting such a method of centralization, no account is taken of local or way business, and of the need of giving to those residing at widely separated intermediate points ample facilities for transportation. Of course, local needs must be considered; but it does not follow from this that one after the other these local roads, instead of being feeders and sources of supply to certain great through systems, should enter into the competition for trans-continental business. If we assume that there was not now a mile of railroad built in the United States, and that it was the intention of a great company or of the national government to give to the people the equivalent of the railroad facilities they are now enjoying, with the greatest economy in outlay, one may be sure that the comprehensive plan thus prepared would bear slight resemblance to the existing order of things; and it may be added there would be a saving in expense, by the suppression of useless construction, amounting in the aggregate to hundreds, if not thousands, of millions of dollars.

Now, the point sought to be established is this: that these defects of unrestricted competition are likely to be much more seriously felt in the future than they have been in the

past. Heretofore, east of the Missouri River there has been in a great many different localities an indisputable need of railroad facilities. In a large degree, these have been supplied, and the competition of the future will not consist in endeavoring to open up an undeveloped territory, but in seeking, by means of new lines, to take a share of the business of railroads that have already established themselves. That is to say, numerous variations will be played on the theme in accordance with which the West Shore and the Nickel Plate Railroads were constructed.

As to such matters as irregularity in rates, discriminations in charges and the like, these, while they are doubtless indirect defects of subsisting competition, need not here be considered, although it is probable that they would be corrected if the railroads of this country were made a public monopoly. Indeed, there is some danger that the mania for regularity, which in the postal system compels equal payments for great and small services, would exhibit itself in the management of the telegraphs and the railroads, and that we should have to complain, not that the charges were unjustly irregular, but that they were unjustly regular.

What our national government might succeed in doing with the railroads and telegraphs of this country, if it took complete control of them, is best shown in the success that has attended its management of the postal service. There is no intrinsic reason why the duty of carrying and delivering letters and papers should not, in this country, have been left to private enterprise. Twenty-five years ago, Wells, Fargo & Co. maintained a postal service which extended all over the Pacific slope; and, although the postal charges were high, the duty which they performed was a valuable one, and was largely made use of by the people of the extreme West. The system passed into disuse in consequence of the improvements which, after the close of the Civil War, the government was able to introduce into its postal service. But there has not been a year from that time to this that great improvements have not been made. The national postal system has nothing to fear in any comparison that may be instituted between the rapidity and extent of its development and the rapidity and extent

of the development of the railway and telegraph systems of this country. Its growth has been proportionately greater, its managers have made vastly larger relative reductions in the rates of charges, and have been quite as zealous in seeking to introduce new and improved methods as any of the railroad magnates or telegraph kings. If it were not for the political opposition of the large express companies, the post-office department would make serious inroads into the express business of this country. As it is, the little work of this kind that it does is carried on with such a degree of economy as to make it utterly hopeless for the express companies to think of competing with it. Now, it cannot be said that these advantages have been secured by marked superiority in management. On the contrary, the post-office department has had to carry on its work in the face of many obstacles to its efficient performance, and often with assistants that few private companies would employ for such purposes. The gains that it has made have been the inevitable results of a public monopoly controlled with a reasonable amount of good judgment.

It will be said, But it would not be safe to trust the government with such large powers and responsibilities as would be obtained by placing in its exclusive charge the control of the railroad systems of this country. At this point, the root of the whole matter is touched. Perhaps it would not be safe; but such an admission does not in any way qualify the force of the argument here advanced, which is a definition of the duties which government may be rightly asked to perform. A man who carries on a mercantile business amounting to tens of thousands of dollars a year will do well not to trust wholly to his memory, but have his accounts kept by some one who thoroughly understands book-keeping. If, however, the man whom he employs is a rascal, the change may be for him a disastrous one, and he would have fared better if he had continued his old practice of keeping his accounts on his thumb-nails or in his head. But his experience could hardly be cited as a proof of the folly of systematic book-keeping. So, too, in the question of the powers that may be granted to government: if the government is untrustworthy, then the less that it is given to do, the better. But the fault clearly lies with the government,

and not with the theory here advanced of what its duties should be.

It is probable, however, that, considered from an administrative point of view, our government, with all its admitted defects, is fairly representative of the people; and, considering the magnitude of the works that it undertakes, it performs its service with as high a degree of efficiency as would be attained by private companies attempting to carry on similar enterprises. Certain classes of work which the national government has taken upon itself to execute have been of an exceptionally high order. The signal-service system has a deservedly high reputation; the habits and haunts of the various species of salt-water fishes have been studied by government officials with a patience and care that have been productive of great practical results; while the work of our government geological survey has attracted and won the praise of those everywhere who are best qualified to judge of the value of such services. It is inherently probable that equal industry, honesty, and enterprise would be shown in such new departments of work as the government should see fit to take up.

The second limitation in the general proposition laid down above does not need to be explained or argued at great length. Where competition is obviously producing better results than could be secured by means of monopoly, few would think of urging that the government should interfere. But, unfortunately, it sometimes happens that the advantages thus obtained are not plainly to be seen at a glance. The government indirectly prevents a desirable competition by adopting a policy of industrial protection, and is applauded by millions of its citizens for so doing. Of late, it has become one of the cardinal doctrines of the labor organizations that the contract system in all public works should be prohibited, although the experience of private individuals is that in miscellaneous works of construction it is cheaper and better to have work done by contract than to attempt to do it one's self. The most successful factories are those where the piece-work plan is an established rule, thus permitting a keen and incessant competition. But this clause of the proposition, when considered abstractly, is not likely to be denied, and hence hardly needs further amplification.

If public offices are to be considered party spoils, then it will hardly be safe to add hundreds of thousands of new office-holders to the scores of thousands who are now in existence, no matter how desirable in theory such additions might be. But if the civil service could be placed upon a reasonably non-partisan basis, if permanency in employment could be secured, no reasonable objection could be made to a very large augmentation in the functions of government.

OSBORNE HOWES, JR.

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#### ELEMENTS OF WAGES.

The writer, led to consider the subject by perusal of articles in the *Quarterly Journal of Economics*, found the following illustration useful in making clear to him the composition of ordinary wages.

The owner of a field of auriferous sand of uniform quality hired four men to dig it for him, paying to each a uniform percentage of the amount dug.

A, an average man, worked with his hands, scooping out the earth in an unintelligent manner, without other aid. The portion he received constituted average or normal wages.

B, an exceptionally large man with huge hands, worked in the same fashion, with greater results. His portion would then represent normal wages plus an increment due to physical superiority, or a rent upon physical ability.

C, an average man, brought a rude shovel, which, however, he used unintelligently like a scoop, but yet by its aid produced more than B had done. His portion, then, represents normal wages plus an increment due to the use of the shovel, or an interest upon capital invested in machinery.

D, a man of average physique, but of superior mental capacity, also brings a shovel, and by skilful handling produces the greatest results of the four. This represents normal wages plus the increment due to the use of the shovel, and plus a further increment due to superior mental ability; i.e., normal wages, interest, and rent of ability.

Normal wages is the value of the product of the average man's unassisted labor.

Rent of ability expresses the value of the product due to superior intellectual or physical ability, and belongs solely to the man who possesses it.

Interest expresses the value of the increase in product due to the use of appliances, and clearly belongs to the owner of those appliances. But, if the owner is not the user, the latter would gain nothing by adopting them; and hence the owner is compelled to offer a portion of this interest to him as an inducement to use them, so that a portion of the gain from using machinery is always an element in ordinary wages.

C. F. CREHORE.

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#### THE PROPORTION OF WAGES TO OTHER FORMS OF INCOME.

Mr. Edward Atkinson has gained for himself a respectable position among economists and a well-deserved reputation as an accurate and painstaking statistician. The public are generally inclined to accept the results of his statistical investigations, without submitting his calculations to any very rigid analysis. This faith in Mr. Atkinson has undoubtedly a sound basis, so far as it is founded upon a sense of his honesty of purpose and industry. Among economists, however, especially among those who believe that statistical investigation can rarely be fruitful of any valuable results except in the hands of an investigator well grounded in economic theory, Mr. Atkinson's results will not be so readily accepted, when his very inadequate comprehension of the theories of Malthus and Ricardo are called to mind.

Of late, Mr. Atkinson, along with the rest of the world, has been directing his attention to questions of distribution, and mainly to what, in this department, is undoubtedly the most important statistical fact about which accurate information is needed. This fact is the proportion which the laborers' share of the total income of the community bears to the share enjoyed by the owners and controllers of land and capital.\*

\* This essay has been republished as a part of Mr. Atkinson's book, *The Distribution of Products*, 1886.

In his essay *What makes the Rate of Wages?* Mr. Atkinson claims—and supposes that he proves statistically—that the laborers of America (in which class he includes all salaried and professional persons) are now rewarded for their personal efforts by receiving 90 per cent. of the aggregate income of the community.\*

Now, it is evident enough that, if this computation can be sustained, not much amelioration of the condition of the laboring classes can be expected from improvements in distribution. The complete success of co-operation, combined with the nationalization of the land or of the establishment of an ideally perfect system of socialism, would augment laborers' incomes within the limit of 11 per cent., and that only provided as much was produced under the new conditions as under the old. Such a percentage of gain would be wholly insufficient to raise the recipients of wages to any condition materially superior to their present one, and it would be at the expense of the total annihilation of such part of the world's civilization as depends upon a certain portion of the community possessing incomes sufficing for more than bare material comforts.

While we have no sympathy with the idea that an equal distribution of wealth or of income is the only ideally perfect distribution, and while we believe, on the contrary, that a considerable degree of inequality is an absolutely essential condition of any highly organized and fully developed society, we do not think that anything is to be gained by distorting facts or by trying to figure out that the well-off absorb, after all, such an insignificant part of the total product that it is hardly worth an anarchist's time to despoil them. Figures such as

\* "I am of the profound conviction that not exceeding 10 per cent. can be set aside as either rent, interest, profit, or *savings*," p. 27. Afterwards, on p. 90 in Appendix I., he estimates the "savings of other classes" as half this 10 per cent. Taken literally, this would seem to imply that this five per cent. of the product was saved out of wages. If so, it is a part of and not a proper deduction from the sum total of wages. A man's income is surely not diminished by his saving something out of it. This would make 95 per cent. instead of 90 per cent. the share of the laborers. It is probable, however, that Mr. Atkinson intends this 5 per cent. to cover rents, and the other 5 per cent. profits and interest; and that he is at fault only in using the word "*savings*," where he should have said "*incomes of rent*," though this interpretation conflicts with the quotation we have made from p. 27, where he distinguishes these "*savings*" from "*rent*."

Mr. Atkinson's really deceive no one. That the laboring classes receive and consume 95 or even 90 per cent. of the total product of the United States is so evidently false as to constitute a *reductio ad absurdum* of the process by which such a result is reached.

We propose, therefore, to examine Mr. Atkinson's computations in his essay, *What makes the Rate of Wages?* and, giving him credit for the care and accuracy which distinguish him, we will assume the correctness of his figures, only criticising the way in which he uses them.

In Appendix I., p. 91, Mr. Atkinson submits the following calculation:—

Approximate estimate of the value of annual product of the census year, . . . . .		\$10,000,000,000
Domestic farm consumption estimated, . . . . .		<u>1,000,000,000</u>
Commercial product, . . . . .		\$9,000,000,000
Estimated profits of capitalists, . . . . .	\$450,000,000	
Estimated savings (sic) of other classes, . . . . .	<u>450,000,000</u>	<u>900,000,000</u>
Wages fund, . . . . .		\$8,100,000,000
Number of persons engaged in all gainful occupations, in round figures, . . . . .	17,400,000	
Deduct soldiers, marines, and persons engaged in subordinate positions in the Government service, . . . . .	<u>100,000</u>	
Remainder, . . . . .	17,300,000	
Administrative force, i.e., mental rather than manual, . . . . .		1,100,000
Working force, i.e., wage earners and small farmers, . . . . .		16,200,000
Average remuneration of the administrative force per year, . . . . .		\$1,000
Average wages or earnings of the working force per year, . . . . .		\$432

Now, how are these results arrived at?

First, the total "commercial product" is estimated from the census returns,—a difficult matter, as in those returns many values are counted twice or more; i.e., first as raw materials and then as part of the value of the finished goods, and values are computed at wholesale: whereas, for the purposes of this comparison, they must be computed at retail

prices. These matters Mr. Atkinson has adjusted as well as he could; and we may accept with some confidence his computation that \$9,000,000,000 represents the annual commercial product of our country, although Mr. Joseph Nimmo, Jr., chief of the Bureau of Statistics, makes this amount \$9,817,900,630, and says that, as some products have been omitted, he has no doubt that "the total value of the products of all industries was over rather than under \$10,000,000,000, perhaps in very considerable measure." \*

Then, assuming that 10 per cent. is a liberal allowance for profits and interest combined, he very naively computes the *total product* instead of the *total capital engaged* at that rate, and thus arrives at a sum of \$900,000,000 as the aggregate yearly gain of all American citizens not in receipt of wages, salaries, or professional fees.

Deducting this amount from his \$9,000,000,000, he gets \$8,100,000,000 as a "wages-fund." He should have deducted it from the sum of \$10,000,000,000, thus getting a sum of \$9,100,000,000 as the wages-fund. For his \$1,000,000,000 of domestic farm consumption is as much a part of a wages-fund as any other part of the annual product, and it really forms a part of the remuneration and consumption of the very 17,300,000 persons whose earnings he is endeavoring to calculate. With this correction, Mr. Atkinson's computation points to \$494 as the average yearly wages of the wage-earners in the United States, \$432 of which is on the average paid in cash, and \$62 paid in kind or board wages or consumed by the producer. But, when paid entirely in money, American laborers receive \$492 per annum on the average.

But Mr. Atkinson and others have shown, I think, conclusively that \$432 represents pretty accurately the average annual compensation of wage-receivers. If wrong at all, that sum is certainly too large rather than too small. Mr. Atkinson's estimate of \$8,100,000,000 as the wages and salary fund of the United States in the year 1880, although wrongly arrived at, must be nearly correct.

\* Mr. Atkinson himself notices this computation, and characteristically proceeds to distribute the excess as wages, without, apparently, any suspicion that without its aid his result as to average wages errs, if anything, on the side of excess.

We have, then, \$1,000,000,000 which Mr. Atkinson does not account for; or, if we accept Mr. Nimmo's calculation, we have \$2,000,000,000 of annual product unaccounted for. But a far more serious error than this has been committed. The computation of \$10,000,000,000 includes only material products. The value of services, whether such services were performed by persons, land, or capital, has been entirely omitted. Yet these services are exactly as much a part of the annual product of the nation as its flour or its pork. A man with an income of \$5,000 will expend, perhaps, \$600 for house rent, \$800 in servants' wages, \$800 for doctors' and lawyers' fees, schooling, and pew rents, \$200 in travelling, concerts, theatres, etc. Probably 85 to 40 per cent. of his expenditure will be for services rather than products. And, though the wage-receiver expends a less proportion of his income for services, they form (including house rent, doctors' bills, etc.) certainly 15 per cent. of his expenditure.

Let us see what this rather serious omission amounts to. And, first, what is the annual value in the United States of personal services? Among Mr. Atkinson's 17,800,000 workers, we find 2,712,948 males and 1,861,295 females engaged in rendering personal and professional services; that is, 4,074,238 working persons, the value of whose labor does not appear in the value of any material product whatsoever.\* As a large number of these renderers of services are paid partly in board, we will assume, merely for the purposes of this exposition, that these 4,000,000 people sell their services at an average of \$300 per year each,—not an extravagant estimate, when it is remembered that the list includes clergymen, lawyers, physicians, actors, etc.,—and that the average wage-earner gets \$432 per annum, more than 40 per cent. above the figure we have named. This would give us a sum of personal services amounting to \$1,200,000,000, which is just as much a part of the yearly product of the nation as the \$10,000,000,000 of material products recognized by Mr. Atkinson.

As to services rendered by land and capital, the value of

\*It will be observed that Mr. Atkinson includes this very 4,074,238 persons among his 17,800,000 producers at the same time that he excludes what they produce from the sum total of annual products.

which does not reappear in that of any product, we have made the following rough computation: One-fifth the value of farms is calculated as due to the buildings and permanent improvements upon them. If we assume half of this sum, or one-tenth of the value of farms, as representing the dwellings upon them, we have \$1,019,700,000 of service-producing wealth. The residences and business real estate, including water power, are valued in the United States at the sum of \$9,881,000,000. The value of the use of business real estate and water powers reappears in that of material products; but the rent of dwellings, with that of the land they occupy, does not so appear. If we assume, therefore, that these latter compose three-fourths of the above total, we have a further sum of service-rendering wealth amounting to \$7,410,000,000. And, altogether, we have a sum of \$8,429,700,000 of such wealth, which at 8 per cent. per annum would yield a rental of \$674,376,000.

Horses and other animals hired or kept for pleasure, railroads and telegraph companies to the extent in which they are utilized for other than business purposes, together with the services performed for us by various other forms of accumulated wealth, would perhaps add enough to this sum to make it in round numbers \$800,000,000 annually. We have here another \$2,000,000,000 of annual income which Mr. Atkinson's computation fails to account for.\*

We have, then, as the total annual product of the United States, according to Mr. Atkinson, but with omissions supplied:—

Material products marketed, . . . . .	\$9,000,000,000
Material products unmarketed, . . . . .	1,000,000,000
Services rendered by persons, . . . . .	1,200,000,000
Services rendered by wealth, . . . . .	800,000,000
Total, . . . . .	\$12,000,000,000

Of this sum, Mr. Atkinson shows us (and in these figures we

\* That this computation is a moderate one would appear from the fact that, according to it, the average expenditure for rents, personal services, pleasure, travelling, etc., is  $\frac{1}{6}$ , or 16 $\frac{2}{3}$  per cent., of income; and this result accords with what would be expected from general observation.

believe him to be as nearly correct as present statistics will allow) that

16,200,000 common laborers and artisans obtain as wages . . .	\$7,000,000,000
And that 1,100,000 laborers of higher class obtain in fees and salaries and wages the yearly sum of . . . . .	<u>1,100,000,000</u>
Total reward of personal efforts, . . . . .	\$8,100,000,000
Leaving, as the remuneration of other industrial agents, the yearly sum of . . . . .	3,900,000,000
Or, if Mr. Nimmo's calculation of material products is to be received as more accurate than Mr. Atkinson's, . . . .	4,900,000,000

In other words, the sum total of the annual rents, profits, and interest in the United States is from  $4\frac{1}{2}$  to  $5\frac{1}{2}$  times what Mr. Atkinson assumes it to be; and the owners and controllers of wealth, instead of receiving only 9 per cent. of the total product, receive  $82\frac{1}{2}$  per cent. to  $87\frac{1}{2}$  per cent.

That this calculation is not seriously out of the way can be shown from another class of statistics. The accumulated wealth of the United States is calculated in our census as amounting to the sum of \$48,642,000,000, all of it income-producing, except the greater part of "household furniture, etc., \$5,000,000,000," and "churches and other real estate exempt from taxation, \$2,000,000,000." Of this, \$7,000,000,000, if we assume \$642,000,000 to be income-producing, there would be in the United States the sum of \$37,000,000,000 productive of income. But, for the purpose of this computation, the sum of national, State, and municipal indebtedness must be added, as the interest paid on these obligations constitutes part of the income of our moneyed classes. And, for a like reason, we should add the capitalized value of all patent rights, charters, franchises, trade secrets, copyrights, and monopolies. These two sums, taken together, cannot well amount to less than \$8,000,000,000;\* and we have, consequently, a gross sum of about \$45,000,000,000 of vested interests from which an income is derived.

Our two computations indicate that this income is from  $8\frac{7}{8}$  per cent. to  $11\frac{1}{8}$  per cent. of the principal. Even the larger

\*This sum is a pure assumption on the part of the writer, made for the purpose of presenting arithmetically the confirmation afforded by this independent calculation of the sum total of incomes other than wages.

of these percentages will not appear extravagant, when it is remembered that in this community money is worth 3 per cent. when the security is as absolutely perfect as security can be, that Eastern merchants pay on the average fully 6 and Western merchants from 7 to 12 per cent., and make a profit for themselves in addition considerably in excess of the percentage they pay, and that farm mortgages pay an average of over 6 per cent.\*

If we suppose that the average of interest paid on American loans and bonds is  $5\frac{1}{2}$  per cent.,—an average that cannot be far from the truth,—and if we further assume that the sum total of profits is about equal to the sum total of interests,—a supposition frequently made in the discussion of economic questions,—we should expect a gross return of rents, interests, and profits equal to 11 per cent. of the capitalized value of property.

On the other hand, according to Mr. Atkinson, the \$45,000,000,000 of income-producing capital, land, and vested interests, which exist in the United States, only yield to their possessors and controllers an average income of 2 per cent. per annum, and this while 3 per cent. can be obtained from borrowers offering the best possible security.

Another method of testing these results can be found in investigating the proportion between annual savings and gross profits. It may be assumed that, as a whole, wage-receivers save little or nothing. The only apparent exceptions to this are the farmers, who are classed as wage-receivers in the census. But, though this class saves a great deal annually in the aggregate, few or none of them but expend more than such part of their income as accrues to them as wages. All of them are landlords and capitalists as well as laborers, and it is because of the addition of rent, profits, and interest to their wages that they are enabled to save.

The salaried and professional class undoubtedly lay by a considerable proportion of their income, but not nearly so great a proportion as landlords, capitalists, and *entrepreneurs*

\* And it must also be borne in mind that 5 per cent., in addition to interest, is not the average, but rather the minimum rate of profit which will satisfy business men.

do, the latter being pre-eminently the saving class of the community.

Assuming, therefore, that, on the average, wage-receivers save little or nothing, we have rents, interest, profits, and large salaries as the fund from which the annual addition to the national wealth can be made. If we estimate *large salaries* and *large professional incomes* at \$220,000,000, or 20 per cent. of the total of that kind of income, we have, according to Mr. Atkinson, an annual fund of \$1,120,000,000 from which savings can be made. Elsewhere, Mr. Atkinson informs us that we, as a people, add yearly about \$900,000,000 to our accumulated wealth, or, in other words, though he unaccountably neglects to draw our attention to the fact, our accumulating classes, the very classes our newspaper economists are given to charging with reckless extravagance, expend only 20 per cent. of their income in the support of themselves and their families, and add annually 80 per cent. of it to their previous accumulations.

On the other hand, if the sum from which accumulations can be made is really, as we have here somewhat roughly computed, between \$4,120,000,000 and \$5,120,000,000,  $17\frac{1}{2}$  per cent. to  $21\frac{3}{4}$  per cent. saved will give us the sum of \$900,000,000 calculated by statisticians as added yearly to our accumulated wealth. This proportion (though within the bounds of reason, while that which results from Mr. Atkinson's figure is simply ridiculous) is yet much too large, which circumstance is probably accounted for by the fact that part of this addition is not saved, but is the result of the rise in the value of real and some kinds of personal property, natural to a community in which population is increasing.

There is yet another statistical comparison which goes to invalidate Mr. Atkinson's results and confirm ours. Although the writer is unable to furnish the exact figures, statistics exist which show that the income of the English people is about the same per capita as that of Americans. But wages with us are at least 40 per cent. higher than with them. It follows from this that, if in America 90 per cent. goes to labor, only 65 per cent. goes to labor in England; and that, while 10 per cent. goes to landlords and capitalists in America, 35 per cent. goes

to them in England. According to this, as the rates of interest and profits are lower in England than in America, the accumulated wealth of England must be more than four times per capita that of America.

On the other hand, if in America only 65 per cent. of the total product goes to wages, 47 per cent. of England's product would go to laborers there, under the supposed conditions; while 35 per cent. in America and 53 per cent in England would accrue to landlords, business men, and capitalists. This would make, after a like allowance for different rates of interest, English accumulations per capita about  $1\frac{1}{2}$  times American, which is a pretty close approximation to the disparity between the two nations in this respect, which is generally supposed to exist.

FREDERICK B. HAWLEY.

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## APPENDIX.

### STATISTICS OF IRON AND COTTON 1830-1860.

#### THE PRODUCTION AND IMPORTS OF IRON IN THE UNITED STATES.

[Figures indicate gross tons.—000 omitted.]

Year.	Production.	Total Imports.	Imports of			
			Pig Iron.	Hammered Bar.	Rolled Bar.	Railroad
1830	165	48	8	31	7	
1831	191	55	7	23	15	
1832	200	84	10	38	21	
1833	218	89	9	36	35	
1834	236	87	11	33	30	
1835	254	87	12	31	38	
1836	272	106	8	33	47	
1837	290	113	14	31	48	
1838	308	84	12	21	35	
1839	325	131	11	25	60	
1840	347	83	6	20	33	29
1841	390	128	10	20	63	33
1842	330	120	19	19	63	35
1843	312	22*	4	6	16†	10
1844	294	177	15	13	40	16
1845	486	80	27	18	34	23
1846	765	81	34	21	34	6
1847	890	97	23	16	40	13
1848	960	179	59	20	82	29
1849	650	226	106	11	173	69
1850	563	468	75	15	248	142
1851	413	410	67	20	254	180
1852	640	502	92	44	291	246
1853	722	619	114	18	387	290
1854	902	669	160	14	329	383
1855	700	404	90		117	127
1856	726	260	80		108	166
1857	713	285	82		87	179
1858	620	219	49		66	76
1859	759	279	72		95	78
1860	821	395	110		106	122

\*The fiscal year 1843 contained but nine months,—from October 1, 1842, to July 1, 1843.

†Grosvenor says this is "evidently a misprint." It is the figure given in the Treasury Report for 1843.

‡Increase chiefly in railroad iron, but also in pig iron.

The figures of the production of iron are those given by R. W. Raymond in the appendix to A. S. Hewitt's pamphlet, *A Century of Mining and Metallurgy in the United States*. But through almost the whole of the period under consideration the statistics are hopelessly uncertain. Mr. Raymond seems to have followed in part the figures of Henry C. Carey, whose statements on any subject connected with the tariff need careful watching. Carey (*Harmony of Interests*, pp. 11, 12) gives the same figures as Mr. Raymond for the years 1880-82, and for the subsequent years of that decade hints at a general development similar to that figured out by Mr. Raymond. See, among other places, his *Review of the Report of D. A. Wells* (1869), p. 9. All figures for the decade are nothing more than guesses, though they probably serve to show roughly what was the actual movement of production. The most discordant statements are made in regard to the decade 1840-50. We present in parallel columns the figures given by Raymond, by Carey (*Harmony of Interests*, as cited above), by Taylor (*Statistics of Coal*, Philadelphia, 1855, p. 46), and by Grosvenor (*Does Protection protect?* pp. 214-216). J. M. Swank (*American Iron and Steel Association Report*, 1876, p. 163) repeats Carey's and Raymond's figures, except in giving 215,000 tons as the production of 1842.

STATEMENTS OF THE PRODUCTION OF IRON, 1840-50.

[Gross tons.—000 omitted.]

Year.	Raymond.	Carey.	Taylor.	Grosvenor.
1840	347	315	287	347
1841	290			360
1842	230	230		376
1843	312			386
1844	394	389	486	427
1845	486	500	502	486
1846	765	765		551
1847	800	800	500	
1848	800	800		620
1849	650	650	650	
1850	565		400	

The figure 565,000 for 1850 is that of the census: it probably rests on guesswork as much as any of the other figures. Mr. Grosvenor's figures rest on a critical examination of Carey's statements, on ingenious use of contemporary data, and on the census figure of 1850. Carey wrote with a strong bias towards exaggerating the product, and Mr. Grosvenor, probably, with a bias the other way. One point seems clear: there could not have been an increase during the five

years between 1842 and 1847 from 230,000 to 800,000 tons, such as is indicated by Carey's figures, which Mr. Raymond follows. The total production of anthracite iron in 1847 was not 120,000 tons. Deducting this from the supposed total of 800,000, we have 680,000 as the production of charcoal iron in 1847 as against 230,000 (chiefly charcoal) in 1842. Considering the small scale on which charcoal iron was made, and the difficulty of increasing rapidly the supply of fuel, it is not possible that the product should have been tripled in five years. Either the figure for 1842 is too low or that for 1847 is too high. After 1850, the facts are clearer, though the figures are still far from exact. Beginning with 1854, we have the figures of the Iron and Steel Association, which are doubtless more or less in the nature of estimates for the earlier years, yet do not rest so much on guesswork as the figures for 1840-50. The following table gives statements for the years 1850-60. The first column gives Raymond's figures, the second those of the Iron and Steel Association, and the third those of Lesley's *Iron Manufacturers' Guide* (Philadelphia, 1859), p. 750:—

## STATEMENTS OF THE PRODUCTION OF IRON, 1850-60.

[000 omitted.]

Year.	Raymond. Gross tons.	Iron and Steel Asso. Net tons.	Lesley. Gross tons ?
1850	563	563	
1851	413		
1852	540	500	
1853	723		
1854	662	736	725
1855	700	784	729
1856	788	863	813
1857	712	798	
1858	629	705	
1859	750	840	
1860	821	919	

If Raymond's figures are reduced to net tons, they will be found to agree fairly well, after 1854, with those of the Iron and Steel Association figures. The frequent omission to state whether the gross ton of 2,240 pounds or the net ton of 2,000 pounds is meant makes the figures uncertain. The gross ton was generally meant in former years; and Lesley's figures probably indicate gross tons, though this is not expressly stated.

The statements of imports have been taken, up to 1847, from the tables in Grosvenor's *Does Protection protect?* pp. 198, 221. For the years from 1847 to 1860, they have been compiled independently from

the Treasury Reports. Until 1854 (inclusive), the Treasury Reports divide bar iron into "rolled" and "hammered," giving separately the imports of each kind. Railroad iron, during this period, is included in the rolled bar. After 1854, however, bar iron includes both hammered and rolled bar, but does not include railroad iron, which is separately classed. In our table, therefore, the figures in column six for railroad iron state, up to 1854, a part of the previous figures in column five for rolled bar, while they indicate after 1854 an additional import.

The figures in column two profess to give the total imports in terms of pig iron. This has been done by assuming that it took  $1\frac{1}{4}$  tons of pig iron to make a ton of rolled or hammered bar, or of railroad iron, and by adding this assumed equivalent of pig iron to the imports of pig. This conversion into pig rests on the authority of Lesley, who states (*Iron Manufacturers' Guide*, p. 761) that  $1\frac{1}{4}$  tons of pig are consumed in making one ton of bar, and of French, who says (*History of the Iron Manufacture*, p. 156) that from  $1\frac{1}{4}$  to  $1\frac{1}{2}$  tons of pig are used in making one ton of iron rails. It should be mentioned that Swank, in the *Iron and Steel Association Report* for 1875, states that, on the average of sixteen years, but  $1\frac{1}{2}$  tons of pig were consumed in making one ton of finished bar; but Lesley's and French's statements refer more particularly to the period here considered. No account has been taken of the imports of the various forms of manufactured iron,—anchors, anvils, tools, and machinery. The duties being usually ad valorem, the customs reports state mainly values, and not weights. The import in these forms has always been large; and if it were considered, as of course it should be, the proportion in which imported iron supplied the consumption of the country would appear still larger than the table indicates.

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The tables on page 384 give the consumption of cotton as stated in three sources. The first figures, both for the United States and for Great Britain, were compiled by Mr. B. F. Nourse in 1868, for the National Association of Cotton Manufacturers and Planters. They are printed in the *Proceedings* of the convention for organizing that association (Boston, 1868), and are also printed in the *Reports of the United States Commissioners to the Paris Exposition of 1867*, vol. vi., *Report on Cotton*, pp. 30–34, 76–80. The column headed "Hunt" gives the figures for the United States, which are printed in *Hunt's Merchant's Magazine*, vol. xlv. p. 11. The columns headed "Bureau of Statistics" give the figures printed in the

*Quarterly Report of the Bureau of Statistics*, No. 3, 1885-86, p. 601, which are stated to have been compiled from Ellison's *Annual Reviews* of the cotton trade. Nourse's and Hunt's figures have been reduced to bales of 400 pounds. The Bureau of Statistics figures state simply the bales, without indicating their weight. The average weight of the cotton bale increased steadily throughout these years. It rose, for the cotton used in the United States, from about 340 pounds in 1830 to over 450 in 1860; while that used in Great Britain rose from about 300 pounds in 1830 to over 420 in 1860. Allowance must be made for this change in comparing the figures of the Bureau of Statistics with those from the other sources.

The figures of Nourse, which rest mainly on the annual statements in the *New York Shipping List*, are, doubtless, the most trustworthy. They agree exactly, for the years 1830-47, with those given by Ellison in the table at the end of his excellent *Handbook of the Cotton Trade* (London, 1858). For the years 1847-57 there is some discrepancy between the figures of the *Handbook* and those of Nourse, but it is not great. Nourse's figures for the United States, as reproduced, give for the years 1830-47 (inclusive) the total consumption in the United States, and for the years 1847-60 the consumption in the North only. Nourse makes no attempt at such a discrimination until 1848, when he begins to state separately the consumption in the South; i.e., "south of the Potomac and west of Virginia." This Southern consumption, which has not been included in our table, is stated to have varied from a minimum of 92,000 bales in 1848 to a maximum of 185,000 bales in 1860. "The entire spinning capacity of the machinery in the South before the war was never equal to the consumption of 90,000 bales," says Nourse. The Southern consumption was largely for miscellaneous non-textile purposes. It has seemed best, on the whole, not to include it in the tabular statement.

The statistics do not agree as to details, and none can pretend to close accuracy; but they indicate clearly the steady and rapid growth of the cotton manufacture, both in the United States and in Great Britain. Some points of detail may be noted. All the figures indicate a great decrease in British consumption and an increase in the American consumption in 1847, the year after the passage of the act of 1846; while there is a sharp increase in Great Britain, with a decrease in the United States, in 1851. These fluctuations confirm the conclusion that the advance of the cotton manufacture in the United States was little affected by changes in duties, but depended mainly on the general state of business activity.

CONSUMPTION OF COTTON					
IN THE UNITED STATES as stated by			IN GREAT BRITAIN as stated by		
Year ending Sept. 1.	Nourse, in bales of 400 lbs.	Hunt, in bales of 400 lbs.	Bureau of Statistics, in bales of un- specified weight.	Nourse, in bales of 400 lbs.	Bureau of Statistics, in bales of un- specified Weight.
1830	107.5			619.0	
1831	154.8			656.7	
1832	156.4			692.2	
1833	170.1			717.5	
1834	177.2			758.5	
1835	198.8			795.2	
1836	220.7			868.5	
1837	211.0	210.0		914.2	
1838	234.0	230.0		1,041.7	
1839	265.0	257.5		954.2	
1840	289.2	277.5		1,147.2	
1841	292.8	287.5		1,095.2	
1842	265.8	262.5		1,067.7	
1843	332.3	327.5	326	1,294.5	1,372
1844	357.1	357.5	417	1,360.0	1,394
1845	398.6	385.0	471	1,516.5	1,622
1846	445.2	437.5	491	1,535.7	1,561
1847	461.1	457.5	512	1,103.5	1,200
1848	545.0	522.5	609	1,441.5	1,315
1849	549.3	512.5	598	1,574.7	1,537
1850	510.8	470.0	570	1,470.5	1,538
1851	403.8	395.0	467	1,647.2	1,667
1852	629.5	592.5	684	1,849.0	1,877
1853	695.9	662.5	782	1,902.2	1,878
1854	636.7	607.5	716	1,940.2	1,874
1855	619.7	590.0	681	2,097.7	2,130
1856	664.6	662.5	770	2,253.3	2,170
1857	738.9	800.0	819	2,065.0	2,247
1858	499.7	595.0	595	2,264.0	1,961
1859	849.5		927	2,441.5	2,179
1860	913.3		972	2,709.0	2,560

The exports of manufactures of cotton from the United States during the period here considered were as follows:—

EXPORTS OF MANUFACTURES OF COTTON FROM THE UNITED STATES.

[000 omitted.]

Average of 1826-30,.....	\$1,180.00	Year 1850,.....	\$4,734.00
“ “ 1831-35,.....	1,706.00	“ 1851,.....	7,241.00
“ “ 1836-40,.....	3,070.00	“ 1852,.....	7,672.00
Year 1841,.....	3,123.00	“ 1853,.....	8,769.00
“ 1842,.....	2,971.00	“ 1854,.....	5,535.00
“ 1843,.....	3,223.00	“ 1855,.....	5,875.00
“ 1844,.....	2,899.00	“ 1856,.....	6,976.00
“ 1845,.....	4,328.00	“ 1857,.....	6,115.00
“ 1846,.....	3,545.00	“ 1858,.....	5,652.00
“ 1847,.....	4,082.00	“ 1859,.....	8,316.00
“ 1848,.....	5,718.00	“ 1860,.....	10,935.00
“ 1849,.....	4,933.00		

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THE  
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*JULY, 1888*

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WAGE STATISTICS AND THE NEXT CENSUS  
OF THE UNITED STATES.

It is characteristic of the practical and realistic direction given to the study of political economy in recent years that great attention is paid to statistics. They lend themselves naturally to the illustration of economic principles, or to exemplify the good results of following out correct economic policy. The theory of free trade has never had a more powerful argument than that deduced from the continually increasing prosperity of Great Britain, as shown by the figures of exports and imports and the extent of its commerce and the size of its merchant marine.

Every political economy, however theoretical and deductive it may be in principle, must feel gratified to find its theories confirmed by the actual experience of mankind. In fact, in the long run, such confirmation must be present, or the theory will fall into contempt. The argument in favor of free trade has always been a curious

intermixture of *a priori* reasoning and *a posteriori* appeals to successful experience. The free traders have always protested against the derogatory insinuation of the protectionists that free trade was all very well in theory, but bad in practice. And, in this appeal to experience, the former have often been so successful that they have driven the latter off from the purely economic ground of direct gain or loss to more theoretical considerations of the effect of free trade on the social position of the community. The weapon which has enabled them to do this has been the statistics of the enormous increase of wealth in free-trade countries since the adoption of the policy of freedom.

But, so long as we remain in the realm of purely dogmatic political economy, the use of statistics can be of very small importance. At the best, they can be only illustrative or confirmatory of the truths already grasped by deductive reasoning. Often they serve rather to interrupt the continuity and harmonious development of the argument than to strengthen it, especially when contradictory statistics are brought forward on the other side. In their nature, they are too empirical and uncertain to form an integral part of a line of reasoning that, in its essence, is still deductive. The two will not successfully blend.

When, however, we get out of the realm of purely dogmatic into that of historical and descriptive political economy, the position of statistics is entirely different. They become then a valuable auxiliary in the work of depicting the evolution of economic institutions, or of describing the present economic condition of the world. In fact, many of the phenomena of economic life are peculiarly adapted to the quantitative measurements of statistics. If we are studying the evolution of the credit system, what can give us a better conception of the importance of credit transaction in modern times compared with former periods, than the figures of note circulation

and clearing-house transactions in civilized countries? If we are describing the present economic resources of the United States, how shall we proceed except by giving the statistics of the productiveness of land, forests, and mines, of the producing power of factories and workshops, of the facilities for water and land transportation, and, if possible, of the total wealth of the community? These attempts of descriptive political economy are sometimes of the most elaborate character. The last census of the United States was a gigantic effort to give a complete description of the social condition of this country. It almost realized Von Schlözer's famous dictum: "*Geschichte sei fortlaufende Statistik; Statistik, stillstehende Geschichte.*" Or, to use a different illustration, it was an attempt to solidify for an instant the great stream of social life, and then to take a cross section which should give us a complete picture of that social life in all its relations at a given moment of time. It was to be an anatomical manikin representing the social *corpus*. It is instructive to notice that, of the twenty great quarto volumes of the census (issued or to be issued), no less than fourteen are devoted to economic statistics; and all of them contain statistics of interest to the economic life of the nation.

Further, when we pass from historical and descriptive political economy, and upon the basis of what we have there learned try to construct an inductive science, the importance of the statistical method becomes still greater. The statistics are no longer mere illustrations, but they constitute a portion of the material out of which we formulate those principles or laws which shall serve both as the explanation of economic life and as a guide to social action in economic affairs. To take concrete examples again: the statistics of the issue of paper money and its depreciation may direct us towards the principles of public credit and also towards the best methods of regulating

the issue of credit currency, and the statistics of the decline of our merchant marine may suggest the cause of such decline and the necessary changes in our legislation. Statistics do not furnish by any means the only material of inductive political economy, nor perhaps even the major portion. The historical method has hitherto been the favorite. But, with the extension of statistical inquiry and the refinements in statistical method, statistics promise to be of constantly increasing value. At any rate, they are now furnishing material in greater amount and of more trustworthiness than ever before.

If, now, we examine the material which statistics furnish to dogmatic, descriptive, and inductive political economy, we shall find it to be much more abundant and fruitful in the departments of production and exchange than in that of distribution. It is easy to express numerically the results of production and the transactions of exchange. It is even possible to indicate the results of different methods of production. For instance, we can compare the cotton crop of the Southern States under the system of free labor with the crops before the war under the system of slave labor. Or we can show the average quantity of cotton cloth made by an operative in a mill compared with that made under the old system of hand labor. We can show, on the other hand, the greater gross product from land under a system of peasant proprietorship compared with a system of large estates cultivated by tenants at will, who have no special inducement to careful husbandry. In transportation, it is easy to show the enormous advantages of the use of steam in the total tonnage carried and the continued increased cheapness of carriage. It is here, too, that the statistician who delights in graphical illustration, and who seems desirous of reducing language again to the stage of hieroglyphics, finds his most fruitful field. We have in mind those curving lines mounting higher and higher, those squares, triangles, and

circles of different areas, those maps with graduated tints, intended to make vivid the continued increase in production, its enormous extent, or the productive power of different parts of the country.

These statistics of production are both easy to get and easy to express, and it is for this reason that they are so numerous and so much used. The statistics of exports and imports are collected through the ordinary agencies of government. The inquiries of the Census Office as to gross production can be easily answered, and very few people have any objection to answering them. The presentation of the statistics is the simplest possible matter. Generally, it is only the gross figures. If any analysis is made, it consists in arithmetical averages,—as the production per capita or per square mile, or the percentage of increase per annum, or the cost per ton of moving freight one mile. The statistics need not be absolutely complete. The general movement of imports and exports can be discerned even if there should be some inaccuracies in the returns or some undervaluations.

The statistics of distribution, on the contrary, are neither easy to get nor are they easy to express. No government officer registers the amount of capital invested by business men from year to year or the rate of return from it. Rents, profits, and wages are private matters; and there is no means of making men reveal them, even if it is possible (and in many cases it is not) for them to give exact figures. Business varies in so many different degrees as to capital, skill, and risk that, even if we had reliable statistics of profits, it would be difficult to formulate any average that would be anything more than the numerical average of the bare figures. Labor is of such varying degrees of efficiency and trustworthiness, and employed under such different circumstances, that an average of actual wages is of little value. Personal interests and social prejudices also affect, unconsciously per-

haps, the persons making, tabulating, or using the returns, so that the statistics furnish material for social polemics rather than social philosophy. In the question of wages especially, statistical science has as yet failed to overcome these prejudices and to command perfect confidence in either its methods or its results.

It is the purpose of this paper to examine the various attempts in the Tenth Census of the United States to get at the wages of labor, and to point out the progressive improvements in method which these attempts show and the next step in this line of progress. This is of especial importance just at this time, when the plans for another census are being formed, and when so many State bureaus of labor are laying down lines of work, which, in order to be of the most value, must be correctly formulated at the beginning, and then prosecuted systematically from year to year.

Before entering upon this examination, it will be well to clear away some erroneous impressions as to what the statistics of wages are intended to show. This will best be done by saying that the statistics of wages are primarily intended, not to determine any question of technical economic distribution, but to determine the question of social distribution. Perhaps no expression in the whole range of economic literature has worked more unfortunate consequences than that of "distribution." It has always seemed to imply that there was a direct division of the product between the producers,—between land-owners, capitalists, and laborers. There is production of wealth by the community, and there is exchange and consumption of wealth by the different members of the community. There is also distribution, which, however, is not direct, but indirect, through the workings of exchange and consumption. The fallacy of the first conception becomes apparent the moment we try to formulate any law of distribution. Some maintain that it is governed entirely by

natural law. This, however, is false, as any study of factory legislation or the influence of trade unions and strikes will show. Others think that it can be controlled by legislation. This again is false, as shown by the history of attempts to fix the rate of wages or the prices of commodities or the rate of interest. Distribution is brought about by the working of a great many different causes, some of them natural, some of them social; and no simple analysis can explain all the different cases.

From the point of view of statistics, the old notion of distribution is especially misleading. The statistics of wages can determine no law of distribution in the technical economic sense. The investigation has to do with the question of social distribution; that is, of the well-being of the population. Its chief value is to answer the question of social content or discontent. It proceeds tacitly on the assumption that, as a matter of social expediency and social justice, the mass of the community should have a comfortable subsistence. It takes it for granted that it is a matter of congratulation if in our country the mass of the community have a better subsistence than in other countries, and that it is to be regretted if we find that their well-being is decreasing. The primary object of statistics of wages, therefore, is to determine the ordinary income of that portion of the population represented by the wage receivers, and what that income is worth in procuring a comfortable subsistence. The technical operations involved are the collection of accurate data, and the presentation of them in such a form as to show the condition of the mass of wage receivers as to income and what income will buy. It is not denied that secondary results, such as the variation of wages in different occupations, or the relation of wages to cost of production or to profits, may also be attained; but the main object of the inquiry is social, and must not be sacrificed to these secondary ones. All statistics of wages must keep this primary object in view.

The last census of the United States made several presentations of wages in manufacturing industries and railroads. The crudest was that given in Volume II., page xi. and page xvii. Manufacturers were asked to give the total number of persons employed and the total amount of wages paid during the census year. The results were as follows:—

<b>Total wages paid,</b>	<b>\$647,909,715</b>
<b>Total number of persons,</b>	<b>2,732,805</b>

Dividing the first of these numbers by the second, we have \$346.90 as the average wages of persons in all these industries. I cannot find that the census presents this figure anywhere as an average of wages for the United States, but it has been extensively quoted as if it were such. Evidently, however, it can lay claim to no such honor. The data on which it is based were extremely defective. It is said that employers were accustomed to return all the men whose names had been on their pay-rolls during the year, without regard to the length of time they were employed. Again, in some industries, the men are regularly employed only a portion of the year. In the lumber trade, for instance, men are employed only six months, so that their average was only \$245.24. In a number of cases, it was reported that only ten months had been made during the census year, so that the wages paid covered only that period. The data are not only defective, but the average presented is no typical average for the reason that it includes men, women, and children. For instance, the average wages in cotton goods is \$245.93, while in foundry and machine-shop products it is \$453.93. The difference is due of course to the relative number of men, women, and children employed in the two industries:—

	Men.	Women.	Children.
In cotton goods there are . . . . .	64,107	91,148	30,217
In foundries there are . . . . .	140,459	675	4,217

Of course there can be no comparison between two such averages; neither is the average for cotton goods of any

value in determining the condition of people in that industry.

When we come to the reports of the special agents in the various industries, we find several attempts at refinement on this method, due evidently to the consciousness that the general average is of no particular value. Thus, the agent for chemical products (vol. ii. p. 991) says, "The average wages for all employees is \$401.11; but, counting the wages of women and children as one-half those of men, the average is \$420.66." Thus, the agent for railroads (vol. iv. p. 32) distinguishes the general officers and clerks, whose average monthly earnings are \$82.42, from the other employees, whose monthly average is \$41.15. An additional refinement is attempted in the iron and steel industry (vol. ii. p. 745). The question of sex and age is not a troublesome one, because there are only 66 women and 7,709 boys in a total of 140,978 employees. This number of employees were paid \$55,476,785 in wages, which gives an average of \$393.51 for each person. This evidently represents predominantly the wages of men, and in so far is a true average. But it represents both skilled and unskilled labor, and so there might be great variations in the wages actually received by individuals. The agent, therefore, attempts to give us some guidance by explaining that "the highest average daily wages of skilled labor were \$2.59; of unskilled labor, \$1.24." Still further, there are great variations in different localities. "The highest average daily wages of skilled labor were paid in Rhode Island, Colorado, and Wyoming Territory,—\$4; the lowest in North Carolina,—\$1.25. The highest average daily wages of unskilled labor were paid in Wyoming Territory,—\$2; the next highest in Colorado and California,—\$1.75; the lowest in North Carolina,—54 cents. It may be remarked of North Carolina that its iron industry in 1880 was wholly confined to the use of the primitive ore bloomery, and that the labor

employed was largely that of colored men." The average wages paid in the four grand divisions were as follows:—

Eastern States, skilled, . . . . .	\$2.70	unskilled, . . . . .	\$1.21
Southern States, " . . . . .	2.09	" . . . . .	1.08
Western States, " . . . . .	2.70	" . . . . .	1.81
Pacific States and Territories, skilled	3.50	" . . . . .	1.75

This analysis of the agent on iron and steel products is based on a perfectly correct feeling that an average of widely separate wages of skilled and unskilled labor represents neither the one nor the other, and that the condition of labor in different localities may be so entirely different that an average is again false. This is a great advance on the general average, and will be of value to us when we consider what the next census of the United States can do in getting statistics of wages.

Mr. Joseph D. Weeks, the agent on the manufacture of coke (vol. x.) and also on the manufacture of glass (vol. ii. p. 1044), makes still further refinements on the general average. He says in regard to wages in the glass industry:—

The total amount of wages paid, \$9,144,100, divided by the total number of hands employed, 24,177, would give a quotient of \$378. Though such a quotient is often regarded as the average yearly earnings of each employee, a little consideration will make it evident that it does not represent such earnings; that it really represents nothing but the division of one number by another. The only circumstances under which a division of the total amount of wages received in any industry by the total number of men employed in that industry would be a correct statement of the earnings of the persons so employed are when the same number of men were employed during the whole year, and when, if the works were idle during any part of that year, the men were idle also, glass-making being their only occupation. . . . In other words, the only way in which it would be possible to show what were the yearly earnings of each man at the glass works of the United States during the census year would be to ascertain directly from the books what each man received; and for such a statement there are no data. . . .

A somewhat similar difficulty exists in any attempt to arrive at the average wages paid in the different classes of labor employed. This

is a most difficult statement to make under any circumstances in this or any other industry. It is very easy to give an average of the different rates of wages paid; but to get at the real average rates — that is, an average which shall consider not only the several rates, but the number of men employed at each rate, by a consideration of both of which the average rate can only be reached — is more difficult.

The agent then makes a very skilful and careful attempt to present the rate of wages in a table, of which the following is a sample: —

RANGE AND AVERAGE RATES OF DAILY WAGES IN THE MANUFACTURE OF WINDOW-GLASS.

Class.	Number.	Range.	Average.
Managers, . . . . .	23	\$1.16 to \$6.00	\$3.90
Boas blowers, . . . . .	44	2.57 to 12.00	5.47
Blowers, . . . . .	424	2.18 to 12.00	5.30
Gatherers, or tending boys:—			
16 years and upward, . . . . .	424	1.76 to 6.00	2.72
Under 16 years, . . . . .	34	.30 to .39	.35

The table is then carried out for all the other occupations or classes in the manufacture of window-glass, of green glass, plate-glass, and of glassware. These tables seem to meet all the requirements of the statistical average. Distinctions of sex, of age, and of occupations are all observed. The number of persons in each occupation is given; and the average wages “is obtained by multiplying each rate of wages by the number of persons employed at that rate and dividing the sum of the products so obtained by the number employed, so that the average represents the real average wages of the different classes.” The “range” gives us the highest and lowest wages, and enables us to control, to a certain extent, the average. In my opinion, this is the most scientific wage return made by the census, and points clearly the direction which further progress will take and the lines upon which the wage statistics of the Eleventh Census ought to be laid

vitate any statistics of labor. It would be like including in statistics of prices not only the wholesale prices in open market, but all the petty transactions of retail trade, forced sales, and country barter.

(2) Wage statistics can best be obtained from employers. The census was again right in seeking its statistics from this source. They alone keep the necessary figures and records from year to year. They are less likely to be influenced by personal feeling or class prejudice to make false or misleading statements. Their returns are much more easily controlled than those of individual workmen. It would be a difficult thing for an employer to increase the wage-list of all his employees in his census schedule, without being detected by the experts of the Census Office or by other men in the same line of business. Large bodies of workmen might, on the other hand, be influenced by a common class feeling to make their wages as low as possible, in order to make a showing on their side of the social question; and it would be almost impossible to control such figures, unless they were manifestly absurd. We have here a tendency which threatens to wreck the whole system of social statistics; namely, that the knowledge of the use that will be made of the results of the investigation will prejudice in advance the original returns. We can avoid this only by seeking our data in absolute records compiled for other purposes, whose use will not prejudice the persons furnishing them. Such records are the pay-rolls of large establishments, keeping the name of the establishment secret. The United States Census has some peculiar advantages in this respect. The country is so large that it can get its statistics from numerous establishments, and effectually conceal their locality. By aggregating the workmen in the same occupations, it can still more effectually conceal the identity of its informants, when they so desire. No difficulty has ever been experienced in persuading employers to furnish

desired facts, when they have once been convinced that no unwarranted use would be made of these facts to prejudice their business. Of course, a great deal depends upon the head of the Census Office himself; and for this reason it is particularly unfortunate that there is not a permanent statistical organization instead of the decennial census.

(3) Wages must be carefully distinguished as to industries, occupations, and the sex and age of the persons employed. This has been done in the returns of the Tenth Census. It is absolutely necessary to distinguish industries, because some require a select body of men or particular skill, and it would be a mistake to confuse these with those requiring less strength or less skill. Classification by industries also enables the census to furnish particular information — which is often of value, especially when extended over several years — as to the condition of these industries. The classification by particular occupations in the industry is scarcely less important; for it enables us to separate the skilled from the unskilled, and to determine the wages of each. Extended over a series of years, such detailed statistics by occupations would give us most valuable information in regard to the changes taking place in the chief industries by the introduction of machinery and the substitution of unskilled for skilled labor. It is directly in such careful detailed work that statistics are often of the most value. The distinctions of sex and age must also be observed. The wages of men, women, and children are entirely different quantities, and are as incapable of addition and averaging as a bushel of potatoes and a pound of butter. It is to be hoped that this folly, condemned by all statistical bureaus in the world, will be rigidly excluded from the Eleventh Census, and that the passion for casting averages, even when the quantities cannot be averaged, will be restrained. In the Tenth Census, it was the special agents — men trained in natural rather than in social science — who were the chief

sinner in this respect. They could not resist the temptation to divide one number by another, even while saying in the next sentence that the result of the division was of no value. On the other hand, the careful separation of the wages of men, women, and children gives us valuable information of the social condition of the working classes. It enables us to determine whether the wages of the man are sufficient to support the family, or whether they must be supplemented by those of wife and child. It enables us to determine, in some cases, how far the labor of women and children is supplanting that of men, owing to the introduction of labor-saving machinery. Extended over a series of years, it would give us the most valuable information as to the progress of industry,—information which really can be obtained by no other method of observation. It is to be hoped that the next census of the United States will distinguish, also, between the married and the unmarried women, which would make the information of still greater sociological value.

(4) The employers must be asked to give the actual wages paid, and not mere estimates of the *rate* of wages. They must also be asked to give the actual number of men receiving these wages. The tables in the glass industry are examples of what is desired, only there one step further should have been taken, and the number of men receiving a definite wage should have been given instead of the number receiving average wages. The average wages can be easily calculated afterwards. The advantage of the actual wage is that we get a definite fact, and not an estimate by a person who may be more or less well informed or more or less honest. It is, of course, true that the actual wages may be returned falsely; but the census is at least asking for a definite thing and not an opinion, and can control the former more easily than it can the latter. The Tenth Census did not fully comply with this last condition, although there are indications

that it had it half unconsciously in mind, and strove in some cases to carry it out. The Eleventh Census should start on this basis,—that all wage statistics should be of actual wages and for a given number of men,—and should accept no other. In all further operations and deductions, the original basis will at least be certain and the validity of the premises unquestioned.

(5) A further division of the work of presenting the statistics of wages is suggested by the returns of the agent for the iron and steel industry noticed above. It appears, namely, that wages are very different in different parts of the country for one and the same industry. The conditions of life in the Southern States, for instance, differ so widely from those obtaining in the Pacific States that the wages of skilled labor in the former are but little above those of unskilled in the latter. This makes it expedient that the statistics should be grouped primarily by districts where the conditions are nearly the same rather than consolidated for the whole country. Such grouping will have its compensating advantages, as all careful statistical grouping has, in the facility it will afford for the special study of conditions in different parts of the country and in the history of local development. The Eastern States are now an industrial community with all the characteristics that accompany that stage; the Western States are still partly agricultural, and the amount of unoccupied land affords a relief to overcrowding in employments; the Pacific States have a scarcity of labor compared with their resources; while the Southern States have the peculiarity of negro labor. These are differences which justify and demand separate consideration at the hands of an intelligent census office.

All of these demands can be met by a census office only by complying with one further demand; namely, that it shall in these investigations have the services of experts. There is no notion more foolish than that a statistical in-

vestigation is a sort of mill into which all sorts of material may be cast, and ground up into percentages and averages which will have a virtue that the original figures had not. You might as well throw sawdust into a flouring-mill and expect to get flour out of it. The virtue of statistical tables lies in the correctness of the original data. What sort of statistics of imports should we have if we allowed importers to fix their own valuations without let or hindrance? The original returns in statistics of wages must be subjected to the closest scrutiny when they first come in. Those which are absurd or false on the face must be rejected; and those which are unusual or difficult to be explained must be elucidated by correspondence with the parties making them, who will perhaps be able to show why their returns differ from those common in the same industry and the same section of country. These explanations must be incorporated in the published returns in the form of notes to the tables, for the guidance of those making use of the statistics. Every bureau of statistics is obliged to do a vast amount of labor of this sort. It can only be done satisfactorily by men who are familiar both with the industries and with statistical methods. The census will never be able to secure such experts until we have a permanent office where men can be trained for it. Our decennial census suffers more from this than from any other cause,—that it is obliged to start every time with an untrained body of officers, who are scattered again at the end of the work, just when their services are becoming of the most value. We shall never have satisfactory statistics in this country until we have at Washington a permanent statistical bureau, which shall have its trained body of experts, able to undertake from time to time any investigation that is demanded, and which shall have the management of the census.

If the next census of the United States is able to employ a body of experts, who will collect information

about wages in the great industries on the lines laid down above, we shall then obtain a mass of wage statistics of very great value, and such as neither our country nor any other up to this time possesses. With the general intelligence of American employers and the force of public opinion, which would readily appreciate the value of such an undertaking when it was once explained, I believe that this could be done. Such a mass of facts would be of great value, both in detail and as a whole; and most interesting conclusions could be reached as to the prosperity of different parts of the country. As the years went on and such a record was continued on the same lines, a really trustworthy picture of the progress of our civilization could be drawn. The sooner we adopt some scientific method, the sooner such a record can be begun, and the sooner shall we be able to avail ourselves of its teachings.

But, even after we have collected such a body of scientific wage statistics, one more operation is necessary before they will answer the question of the income of the working classes. No average wage and no combination of averages can show us the condition of the working classes, because an average may be made up of so widely divergent extremes. This condition can be shown only by means of proportions; that is, by showing how many of the men receive a certain income, how many receive less, how many more, and so on. It is impossible to give illustrations of this from the Tenth Census, because we do not have the number of workmen specified. We cannot therefore give the proportions of actual wages received. We can, however, give the proportions in some cases of the different rates of wages received. This brings us to a series of statistical calculations of the following sort:—

Table 1 classifies the returns of the rates of wages in four occupations as they are given in the census (Volume XX. for common laborers, carpenters, and engineers, Volume II. for the workmen in glass works). The scale of

wages is based on those most commonly paid, as \$1, \$1.25, and so on, other wages being placed in the nearest class, so that a wage of \$1.20, for instance, is classed with \$1.25. The scale is in no sense, therefore, an average of the different wages; but by far the larger number fall together with the numbers in the scale:—

TABLE I.  
PERCENTAGE OF WAGE RETURNS AT DIFFERENT RATES OF WAGES IN FOUR OCCUPATIONS.

Daily Wages.	Common Labor'rs.	Carpen- ters.	Engi- neers.	Glass- men.	Daily Wages.
<del>0.50</del>	1.4				<del>0.50</del>
<del>.75</del>	5.0				<del>.75</del>
<del>1.00</del>	21.6	.6	1.1	8.5	<del>1.00</del>
<del>1.25</del>	44.7	2.5	3.4	13.7	<del>1.25</del>
<del>1.50</del>	20.1	12.7	9.5	4.2	<del>1.50</del>
<del>1.75</del>	4.4	24.2	15.3	12.2	<del>1.75</del>
<del>2.00</del>	2.0	23.7	18.3	11.8	<del>2.00</del>
<del>2.25</del>	.8	15.3	13.8	4.6	<del>2.25</del>
<del>2.50</del>		10.8	13.5	1.9	<del>2.50</del>
<del>2.75</del>		1.9	5.4	5.0	<del>2.75</del>
<del>3.00</del>		3.3	10.3	1.7	<del>3.00</del>
<del>3.25</del>			1.1	2.7	<del>3.25</del>
<del>3.50</del>			1.4	22.0	<del>3.50</del>
<del>3.75</del>			2.0	1.2	<del>3.75</del>
<del>4.00</del>			3.2	5.3	<del>4.00</del>
<del>4.25</del>			.7	.2	<del>4.25</del>
<del>4.50</del>			1.0		<del>4.50</del>
<del>4.75</del>				.2	<del>4.75</del>
<del>5.00</del>				4.3	<del>5.00</del>
<del>5.25</del>					<del>5.25</del>
<del>5.50</del>				.5	<del>5.50</del>
	100.	100.	100.	100.	

The object of this table is to show at a glance about what are the rates of wages paid to workmen in various

occupations. We see, for instance, that the prevailing rate of wages for common laborers is \$1.25, although considerable numbers receive only \$1; and, in another considerable number of cases, \$1.50 is reported. If we turn to carpenters, we see that they are paid at higher rates, their rates really beginning where those of the laborers leave off. Engineers again are paid much higher than common laborers; and their wages range higher than those for carpenters, as is shown by the larger number of cases where \$2.50 and over is paid. The greater range of wages shows that the engineers are not so homogeneous a body as the carpenters or the laborers. There are greater differences of skill among them. The column for workmen in the glass industry differs from the others in two respects. It is based on the actual number of men employed at different rates of wages, and hence is a truer representation of wages actually received; but it is not wholly true, because the original returns are not used, but only the averages in each occupation. Managers and clerks and boys are excluded, in order to get at the wages of real workingmen of adult age. Again, the workmen in the glass industry are not a homogeneous class like common laborers or carpenters, but include men of varying degrees of skill. This explains the wide range of wages from \$1 up to \$5.50. At the bottom stand the unskilled laborers, over twenty-two per cent. of the whole, receiving only \$1 or \$1.25 a day. Then there is a body of skilled men, twenty-four per cent. of the whole, receiving \$1.75 and \$2 a day. Then there is a very considerable number of skilled workmen, twenty-two per cent., receiving as high as \$3.50 a day, and a few, nearly five per cent., who receive very high wages, \$5 or more.

It must be clearly understood that this and the following table do not possess in themselves any validity. They are given merely as examples or illustrations of what might be done with wage statistics. In order to have any

validity, they should have been based on actual returns of the number of workmen and their actual wages. If the next census will give us such figures, they can be analyzed in this double direction. Men of a common occupation may be taken in all industries, as common laborers, and be classified so as to show the proportionate number receiving each rate of wages; or the men in a single industry may be taken, as above in the glass industry, and their distribution shown. With the original

TABLE II.  
CLASSIFICATION OF WAGE RETURNS SHOWING NUMBER AT OR ABOVE EACH RATE  
(on basis of 1,000).

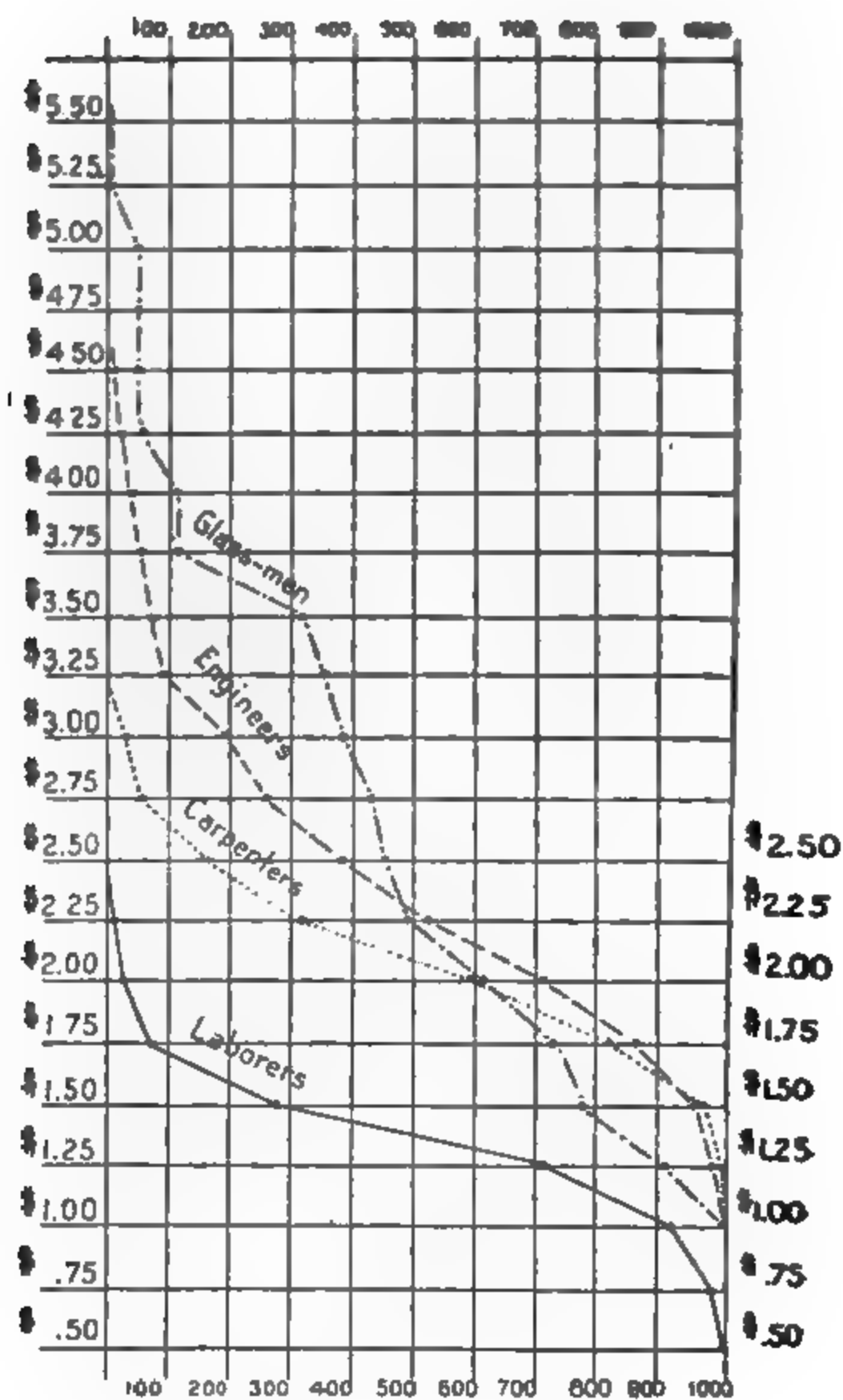
Daily Wages.	Common Labor'rs.	Carpenter.	Engi-neers.	Glass-men.	Daily Wages.
\$5.50 or over				5	\$5.50 or over
5.25 " "				5	5.25 " "
5.00 " "				43	5.00 " "
4.75 " "				50	4.75 " "
4.50 " "			10	50	4.50 " "
4.25 " "			17	52	4.25 " "
4.00 " "			49	105	4.00 " "
3.75 " "			69	117	3.75 " "
3.50 " "			83	337	3.50 " "
3.25 " "			94	364	3.25 " "
3.00 " "		83	197	381	3.00 " "
2.75 " "		52	251	431	2.75 " "
2.50 " "		160	386	450	2.50 " "
2.25 " "	8	313	524	496	2.25 " "
2.00 " "	28	600	707	614	2.00 " "
1.75 " "	72	842	880	736	1.75 " "
1.50 " "	273	969	955	778	1.50 " "
1.25 " "	720	994	980	915	1.25 " "
1.00 " "	986	1,000	1,000	1,000	1.00 " "
.75 " "	986				.75 " "
.50 " "	1,000				.50 " "

returns on the right basis, any combination desired may be made.

One more operation brings us to our goal; namely, to show the income of wage receivers. Table 2 is constructed by adding to the wage returns at each rate all the wage returns of rates above that. For instance, among common laborers, 8 returns showed a wage of \$2.25; 28 showed a wage of at least \$2; 72, of at least \$1.75; 273, of at least \$1.50; 720, of at least \$1.25, and so on. The same remark is to be made as above; namely, that this particular table has no validity, because it is based on rates of wages instead of actual wages.

The object of this table is to show what the minimum income of great bodies of workmen is. In Table 1, it appeared that common laborers received \$1.25 a day, some of them more and some of them less. In this table, it appears that in 720 cases out of 1,000 they receive at least that. In treating the question of income in connection with the cost of subsistence or the standard of living, the real point is the minimum income of large numbers of persons. It might be shown, for instance, that the average wages of laborers was \$1.50, and that at \$1.50 a day persons could live comfortably; but that would prove nothing so long as a large number of workmen did not get that wage. The abundance enjoyed by the workmen above the average does not fill the stomachs of those below. The table offers also interesting comparisons of the well-being of masses of workmen in different occupations. At the point where the common laborer reaches his maximum, \$2.25, there are still 313 carpenters, 524 engineers, and 496 glass workmen out of 1,000 enjoying that or a higher rate of wages. At the point where carpenters reach their maximum, \$3, there are still 197 engineers and 381 glass workmen out of 1,000 enjoying that or a higher wage.

The following diagram shows the same thing graphically, and explains itself:—



This is a sample of a sort of diagram that it might be interesting to carry out in different directions in the next census. One perceives at once the inferior position of the common laborers, and sees, when you are speaking of a \$1.50 wage, for instance, exactly how many enjoy it. One sees the relative position of carpenters and engineers; that the latter start in some cases with about the same wages as the former, but gradually draw away from them until in the upper wage classes they are in every case more heavily represented. Finally, the peculiar line representing the glass-men shows what we may expect when we take all the workmen in any large industry without regard to their skill. The lower part of the line is inferior to both the carpenters and the engineers, while the upper part is greatly superior. We have, for instance, the apparent contradiction that a smaller number of glass-men receive at least \$1.50 than of carpenters; while a much larger number receive \$2.50 or over. This suggests the remark that in a real census it would not be advisable to compare men in a homogeneous occupation like the carpenters with men in a diversified industry like the glass-men. It would be allowable to compare men in different occupations, whether skilled or unskilled, with each other, as, for instance, brakemen on a railroad and telegraph operators; and, on the other hand, to compare men in different industries with each other, as men in the iron and steel industry and those in the glass industry.

Finally, there is one more manipulation which it would be foolish to attempt, even by way of illustration, on the insufficient data of the Tenth Census. If the four industries or occupations we have thus far used for the purpose of illustration were all the occupations of the country, and if the returns were of the real number of workmen with their actual wages, then a combination of all these in one table would give us the incomes of workmen in the United States. We could then say that such a pro-

portion of workmen receive at least such and such an income. It would be misleading to attempt such a combination except on the basis of full and exact returns which have been subjected to the most careful and rigorous scrutiny. It is very probable that the next census, with the most conscientious and strenuous effort, may not be able to approximate such a result. It is probable that it will be much more successful in some highly organized industries like cotton mills than in others like carriage factories. But the method has this great advantage: that, just so far as it gets complete returns from any one industry, these are of value in themselves without regard to the final grand combination. If we should have complete returns from all iron works or all textile industries or all railroad employees, they would be of immense value as indicative of the incomes of work-people in this country, even if the returns from car works or tobacco factories should on examination prove to be worthless. As was said before, accuracy and limitation are as valuable in statistical work as comprehensiveness and apparent exhaustiveness.

In conclusion, I desire to point out very briefly the way in which wage statistics collected by the next census on the plan here advocated could be used. It is premised that they shall be the actual wages of a known number of men, shall be distinguished by industries or occupations and by section of country, shall be collected or at least scrutinized by experts, and shall be subjected to the manipulations shown in Tables 1 and 2.

The value of wage statistics lies in four directions: —

- (a) In determining the incomes of the laboring class.
- (b) In comparing wages in different countries or in different parts of the same country.
- (c) In comparing present wages with past wages.
- (d) In the possibility of co-ordinating wages with the cost of living in all the above cases, so as to show the actual well-being of the working classes.

A mass of wage statistics collected by the above method would enable us to do all these things.

(a) We could display the income of the working classes in the most important particular; that is, the proportion of men enjoying a certain income or above. We could do this for the whole body of workmen or we could do it for the men in any one industry. We could do it for masses of unskilled workmen, say the common laborers, in all industries, and thus determine the actual income of what would probably be the lowest stratum of the working classes. We could do it for classes of skilled workmen, such as glass-blowers or cotton-spinners or for workmen in a protected industry like the iron industry. The variety of practical questions that could be answered in this way is enormous.

(b) Such wage statistics would enable us to compare the whole mass of workmen in one country with the whole mass of workmen in another country, and get some idea of the wages of each. It would enable us to compare the incomes of men in any one industry in one country with the incomes of men in the same industry in another country. All such attempts at the present time shatter on the differences in the methods of carrying on the industry in any two countries. In one country, for instance, much more machinery is used than in a second; and any comparison by an average wage is vitiated by the fact that more unskilled labor is employed by the first than by the second. With proportionate wage incomes, such variations make no difference, or rather they reveal themselves at once in the lower range of wages in the first case, showing that cost of labor is lower on account of the more extensive employment of unskilled workmen. Statisticians have wasted their efforts for many years in fruitless attempts to classify the men in the same industry in different countries, so that the classes would exactly cover each other. They will never be able to do this, because

the differences in technique are so great. We shall never reach a comparison of wages on that basis; and it is better to abandon the attempt at once, and take up that which is practicable, and which will at the same time accomplish the object aimed at,—namely, to show the condition of the men in that industry and the cost of labor. Our own census could in the same way show us the relative condition of all workmen or of workmen in the same industry in different parts of our own country,—as, for instance, in the North and in the South, in the East and on the Pacific Coast.

(c) Almost the same remarks might be made in reference to comparing present wages with past, which lies at the bottom of all attempts to determine the progress of the working classes. Such attempts shatter again on the changes in technique and the improvements in methods of production. A cotton-spinner now is not like the cotton-spinner of fifty years ago. The terms do not mean the same thing. So that, when we say that cotton-spinners receive greater or less wages than they did fifty years ago, we are really comparing incommensurable terms. These difficulties can never be fully overcome. No mere wage statistics can determine the relative well-being of the working classes at two different times. But proportionate wage incomes, collected on the same system at successive intervals, would give us valuable data for such determinations.

(d) Again, it is everywhere recognized that mere money wages do not determine the well-being of the working classes; that they must be brought into connection with the cost of living. No average wage can do this; for, although the average may allow of a very comfortable subsistence, there are, of course, many men below the average. Proportionate wage statistics would enable us to do this. Suppose, for instance, it appeared from careful investigation that, at current retail prices, \$400

would support a laboring man and his family in great comfort, our statistics would give us an indication of the number of cases in which workingmen would probably be able to attain that amount.

Finally, it is not denied that there are many difficulties in deducing actual income from wages, as, for instance, in irregularity of employment, in different methods of payment, in opportunities for extra remuneration, in special privileges, as house rents, free libraries, etc., which some employers afford their workmen. These can be treated only by statistical experts, which is only repeating what has been said before: that statistical results depend as much upon the skill and judgment of the statistician as upon the figures themselves. You cannot have scientific statistical results unless you employ scientifically trained statisticians.

**RICHMOND MAYO SMITH.**

## RUSKIN AS A POLITICAL ECONOMIST.

WRITING, in 1871, the final preface to *Munera Pulveris*, Mr. Ruskin says, "The following pages contain, I believe, the first accurate analysis of the laws of political economy which has been published in England." On the other hand, the *Daily News*, as quoted by Ruskin himself, called his *Fors Clavigera* "a curious magazine of the blunders of a man of genius who has travelled out of his province." Which is right?

Mr. Ruskin has both undertaken to meet the subject on its old ground and to extend it over new. He has treated it according to the rules other economists had left, and he has sought to establish for it new rules of his own. He has written of political economy as understood by economists, and of political economy as understood by himself. Let us take the narrower limit first.

Ruskin's economic writings are to be found chiefly in *Munera Pulveris*, *The Crown of Wild Olive*, *Unto This Last*, *Sesame and Lilies*, and *Time and Tide*; secondarily, scattered through the leaves of *Fors Clavigera*; and, lastly, *passim* in all his works. He has never written a systematic treatise, hardly even a synopsis, of his views. There is, consequently, much obscurity, more repetition, and some contradiction. Obviously, the first difficulty of the critic of Ruskin's principles will be the discovery and just expression of them.

Ruskin is always wandering and digressive, imaginative, and capricious in style and thought. He is generally egotistical, sometimes ill-tempered, occasionally even childish and absurd. Many of his earlier sentences were penned in prejudice and ignorance; some of his last, in senile irritation at the world in which he writes; and, having

said all this once, his critic should forever and finally dismiss it from the question.

I.

"Eleven years ago, in the summer of 1860," says Ruskin, in the preface to *Munera Pulveris*, "perceiving then fully (as Carlyle had done long before) what distress was about to come on the said populace of Europe through these errors of their teachers, I began to do the best I might to combat them, in the series of papers for the *Cornhill Magazine*, since published under the title of *Unto This Last*. The editor . . . was my friend, and ventured the insertion of the three first essays; but the outcry against them became then too strong for any editor to endure, and he wrote to me . . . that the magazine must only admit one economical essay more. . . . As I had taken not a little pains with the essays, and knew that they contained better work than most of my former writings, and more important truths than all of them put together, this violent reprobation of them by the Cornhill public set me still more gravely thinking; and . . . I resolved to make it the central work of my life to write an exhaustive treatise on Political Economy." *Unto This Last*, then, was the first essay; but Ruskin's system has been such as to make any sort of historical treatment impossible. Let us, without regarding order of publication, first consider his views of political economy as it then existed, or—shall we say?—as it now exists.

As domestic economy regulates the acts and habits of a household, political economy regulates those of a society or State, with reference to the means of its maintenance [says Ruskin]. Political economy is neither an art nor a science, but a system of conduct and legislation, founded on the sciences, directing the arts, and impossible except under certain conditions of moral culture. The study which, lately, in England has been called political economy is, in reality, nothing more than the investigation of some accidental phenomena of modern commercial operations; nor has it been true in its investigation even of these. [*Munera Pulveris*, i.]

And the object of political economy is the maintenance of the State, *i.e.*,—

The support of its population in healthy and happy life, and the increase of their numbers, so far as that increase is consistent with their happiness. It is not the object of political economy to increase the numbers of a nation at the cost of common health or comfort, nor to increase indefinitely the comfort of individuals by sacrifice of surrounding lives or possibilities of life. The assumption which lies at the root of nearly all erroneous reasoning on political economy — namely, that its object is to accumulate money or exchangeable property — may be shown in a few words to be without foundation. . . .

We must yet farther define the aim of political economy to be “the multiplication of human life at the highest standard.” It might at first seem questionable whether we should endeavor to maintain a small number of persons of the highest type of beauty and intelligence or a larger number of an inferior class. But I shall be able to show in the sequel that the way to maintain the largest number is first to aim at the highest standard. . . .

The perfect type of manhood, as just stated, involves the perfections (whatever we may hereafter determine these to be) of his body, affections, and intelligence. The material things, therefore, which it is the object of political economy to produce and use (or accumulate for use) are things which serve either to sustain and comfort the body or exercise rightly the affections and form the intelligence. Whatever truly serves either of these purposes is “useful” to man, wholesome, healthful, helpful, or holy. By seeking such things, man prolongs and increases his life upon the earth. . . .

To thoughtless persons, it seems otherwise. The world looks to them as if they could cozen it out of some ways and means of life. But they cannot cozen it: they can only cozen their neighbors. . . . For every piece of wise work done, so much life is granted; for every piece of foolish work, nothing; for every piece of wicked work, so much death is allotted. . . . But, when the means of life are once produced, men, by their various struggles and industries of accumulation or exchange, may variously gather, waste, restrain, or distribute them, necessitating, in proportion to the waste or restraint, accurately, so much more death. . . .

Such being the everlasting law of human existence, the essential work of the political economist is to determine what are in reality useful or life-giving things, and by what degrees and kinds of labor they are attainable and distributable. This investigation divides itself under three great heads,—the studies, namely, of the phenomena: first, of wealth; secondly, of money; and, thirdly, of riches.

It will be seen that, by the definitions with which Ruskin starts, we are perhaps carried out of the domain of the orthodox science. Political economy has become, as it were, *qualitative*, not *quantitative* merely,—and qualitative of other elements than money, as the mercantile school thought, or even than wealth, as defined by Smith and Mill.

Now, this is the first great change that Ruskin seeks to make in the orthodox science, in the idea of what is wealth; that is, of what is *value*. Yet this may be said to be within the scope of orthodox economy, which treats of labor, of value, of money, of *x*, *y*, and *z*, and the quantity of each. Ruskin does not yet introduce a fourth variable; but he says: "Your *y* is not *y*: it is  $a + b$ . In fact, you do not know anything about *y*."

The real gist of these papers, their central meaning and aim, is to give . . . a logical definition of WEALTH. . . . The most reputed essay on that subject which has appeared in modern times, after opening with the statement that "writers on political economy profess to teach or to investigate the nature of wealth," thus follows up the declaration of its thesis: "Every one has a notion, sufficiently correct for common purposes, of what is meant by wealth. . . . It is no part of the design of this treatise to aim at metaphysical nicety of definition." [*Unto This Last*, Preface.]

What should we think, says Ruskin, of a writer on astronomy who began his treatise by saying, Every one has a notion, sufficiently correct for common purposes, of what is meant by stars? "There is not one person in ten thousand who has a notion sufficiently correct, even for the commonest purposes, of 'what is meant' by wealth; still less of what wealth everlastingly is, whether we mean it or not."

He quotes Mill's definition: wealth consists of all useful and agreeable objects which possess exchangeable value. What, then, is value?

The word "value," when used without adjunct, always means in political economy value in exchange (Mill, III. i. 3). So that, if two

ships cannot exchange their rudders, their rudders are, in politico-economic language, of no value to either? [*Unto This Last*, iv.]

Moreover, usefulness and agreeableness underlie the exchange value, and must exist before we can esteem the thing an object of wealth.

Now, the economical usefulness of a thing depends not merely on its own nature, but on the number of people who can and will use it. A horse is useless, and therefore unsalable, if no one can ride, a sword if no one can strike, and meat if no one can eat. Thus every material utility depends on its relative human capacity. Similarly, the agreeableness of a thing depends not merely on its own likableness, but on the number of people who can be got to like it. . . .

That is to say, the agreeableness of a thing depends on its relative human disposition. Therefore, political economy, being a science of wealth, must be a science respecting human capacities and dispositions. But moral considerations have nothing to do with political economy (Mill, III. i. 2). Therefore, moral considerations have nothing to do with human capacities and dispositions.

Ruskin also combats the views that "anything which is an object of desire to numbers, and is limited in quantity so as to have rated worth in exchange, may be called or [even] virtually become wealth"; and that "the worth of things depends on the demand for them instead of on the use of them." And he compares an obscene French lithograph with the pictures of Tintoret in Venice. The labor employed on the stone for the lithograph was very much more than Tintoret gave to his picture: if labor be the origin of value, therefore, the stone is the more valuable article of the two. And since, also, it is capable of producing a large number of immediately salable or exchangeable impressions, for which the "demand" is constant, the city of Paris is, under all hitherto stated principles of political economy, richer in the possession of the lithographic stone than Venice with the picture.

But no. *Wealth* consists in an intrinsic *value* developed by a vital power; and the study of wealth is a province of natural science,—it deals with the essential properties

of things. The study of *money* is a province of commercial science: it deals with conditions of engagement and exchange. The study of *riches* is a province of moral science: it deals with the due relations of men to each other in regard to their material possessions, and with the just laws of their association for purposes of labor. And *wealth* consists of things in themselves valuable; *money*, of documentary claims to the possession of such things (*not* only a "medium of exchange"); and *riches* is a relative term, expressing the magnitude of the possessions of one person or society as compared with those of others.

Now, then, what is value?

Value signifies the strength or "availing" of anything towards the sustaining of life, and is always twofold; that is to say, primarily, INTRINSIC, and, secondarily, EFFECTUAL.

The reader must, by anticipation, be warned against confusing value with cost or with price. *Value is the life-giving power of anything; cost, the quantity of labor required to produce it; price, the quantity of labor which its possessor will take in exchange for it.* Cost and price are commercial conditions, to be studied under the head of money.

Intrinsic value is the absolute power of anything to support life. A sheaf of wheat of given quality and weight has in it a measurable power of sustaining the substance of the body; a cubic foot of pure air, a fixed power of sustaining its warmth; and a cluster of flowers of given beauty, a fixed power of enlivening or animating the senses and heart.

It does not in the least affect the intrinsic value of the wheat, the air, or the flowers, that men refuse or despise them. Used or not, their own power is in them, and that particular power is in nothing else.

But, in order that this value of theirs may become effectual, a certain state is necessary in the recipient of it. . . . *The production of effectual value, therefore, always involves two needs: first, the production of a thing essentially useful; then the production of the capacity to use it.* Where the intrinsic value and acceptant capacity come together, there is effectual value, or wealth; where there is either no intrinsic value or no acceptant capacity, there is no effectual value,—that is to say, no wealth. A horse is no wealth to us if we cannot ride, nor a picture if we cannot see, *nor can any noble thing be wealth, except to a noble person.* As the aptness of the user increases, the effectual value

of the thing used increases, and in its entirety can co-exist only with perfect skill of use and fitness of nature. [*Munera Pulveris*, i.]

“Valuable material things,” he goes on, “may be conveniently referred to five heads”:—

- (1) Land, with its associated air, water, and organisms.
- (2) Houses, furniture, and instruments.
- (3) Stored or prepared food, medicine, and articles of bodily luxury, including clothing.
- (4) Books.
- (5) Works of art.

A list notable chiefly for its omissions.

Value depends neither on price, as when the owner of a “galled jade” paid for it his hundred pounds, nor on cost, as in the Paris lithographic stone, nor on caprice. “And the wealth of the world consists broadly in its healthy food-giving land, its convenient building land, its useful animals, its useful minerals, its books and works of art.”

*Valor*, from *valere*, to be well or strong (*ὕψαινω*),—strong, in life (if a man), or valiant; strong, *for* life (if a thing), or valuable. To be “valuable,” therefore, is to “avail towards life.” A truly valuable or availing thing is that which leads to life with its whole strength. In proportion as it does not lead to life, or as its strength is broken, it is less valuable. In proportion as it leads away from life, it is unvaluable or malignant. The value of a thing, therefore, is independent of opinion and of quantity. . . .

The real science of political economy, which has yet to be distinguished from the bastard science, as medicine from witchcraft and astronomy from astrology, is that which teaches nations to desire and labor for the things that lead to life, and which teaches them to scorn and destroy the things that lead to destruction. And if, in a state of infancy, they suppose indifferent things, such as excrescences of shell-fish and pieces of blue and red stone, to be valuable, and spend large measure of the labor which ought to be employed for the extension and ennobling of life in diving or digging for them and cutting them into various shapes; or if, in the same state of infancy, they imagine precious and beneficent things, such as air, light, and cleanliness, to be valueless; or if, finally, they imagine the conditions of their own existence, by which alone they can truly possess or

use anything,—such, for instance, as peace, trust, and love,—to be prudently exchangeable, when the market offers, for gold, iron, or excrescences of shells,—the great and only science of political economy teaches them, in all these cases, what is vanity and what is substance, and how the service of Death, the Lord of Waste, and of eternal emptiness, differs from the service of Wisdom, the Lady of Saving, and of eternal fulness,—she who has said, “I will cause those that love me to inherit SUBSTANCE, and I will FILL their treasures.” [*Unto This Last*, iv.]

And the term “wealth” is never to be attached to the accidental object of a morbid desire, but only to the constant object of a legitimate one. It is intrinsic. It is dependent, in order to become effectual, on a given degree of vital power in the possessor. “In giving the name of wealth to a thing we cannot use, we in reality confuse wealth with money”; for it has only value in exchange, not effectual value. It is at best a cumbrous form of bank-note. “Wealth is the possession of the valuable by the valiant.” And it follows, the actual existence of wealth being “dependent on the power of its possessor, that the sum of wealth held by the nation, instead of being constant or calculable, varies hourly — nay, momentarily — with the number and character of its holders. And, further, since the worth of currency is proportioned to the sum of material wealth which it represents, if the sum of the wealth changes, the worth of the currency changes.”

So much for the material of the science, the *y* of which it treats. I have quoted at length upon this point, partly because it seems likely to remain the most effectual part of Ruskin's quota to the history of economics, partly because it was necessary once for all to give an idea of Ruskin's style and matter,—a style loaded with thought so broad, with meaning so full, that it is as unjust to sum it up in formulas as to represent a statue by mathematical lines. Yet all this can hardly be said to transcend the scope of economics. So far as Ruskin places his wealth in land and its products, he merely reacts towards the

physiocrats and Quesnay from Adam Smith's criticism of them. And many others before Ruskin have pointed out that Adam Smith, after distinguishing value in exchange from intrinsic or, as Ruskin calls it, effectual value, drops the latter from the case. Ruskin picks it up. So far, the general consensus of later economists is with him, even as reported in those repertories of the average, the encyclopædias. Let us now turn to minor but more mooted points.

## II.

What is productive labor? "That which produces utilities fixed and embodied in material objects," says Mill. Ruskin takes the definition, and with amusing irony, too long to quote (see *Fors*, letter iv.), reduces it rapidly to a Saxon sentence: "The Greatest Thinker in England means by these beautiful words to tell you that Productive labor is labor that produces a Useful Thing, which, indeed, perhaps you knew."

But, if Mr. Mill had said so much, simply, you might have been tempted to ask farther, "What things are useful and what are not?" And as Mr. Mill does not know, nor any other Political Economist going, and as they therefore particularly wish nobody to ask them, it is convenient to say, instead of "useful things," "utilities fixed and embodied in material objects," because that sounds so very complete and satisfactory information that one is ashamed, after getting it, to ask for any more. . . . [*Fors*, iv.]

Mr. Mill has not defined the real meaning of usefulness. The definition which he has given — "capacity to satisfy a desire or serve a purpose" (III. i. 2) — applies equally to the iron and silver; while the true definition — which he has not given, but which, nevertheless, underlies the false verbal definition in his mind, and comes out once or twice by accident (as in the words "any support to life or strength" in I. i. 5) — applies to some articles of iron, but not to others, and to some articles of silver, but not to others. It applies to ploughs, but not to bayonets, and to forks, but not to filigree. [*Unto This Last*, iv.]

Ruskin is equally intolerant of Mill's exposition of a demand for labor not a demand for commodities, in which

celebrated argument (Mill's *Principles*, vol. i. p. 102) he discovers three fallacies, and concludes:—

Underlying these three fallacies, however, there is in the mind of "the greatest thinker of England" some consciousness of a partial truth which he has never yet been able to define for himself, still less to explain to others. The real root of them is his conviction that it is beneficial and profitable to make broadcloth, and unbeneficial and unprofitable to make lace. [*Fors*, ii.]

Ruskin is never so jocund as when detecting these failures in consistency in Mr. Mill, which, he seems to think, yet may save Mill's soul.

So much for wealth and value and produce; *i.e.*, product of productive labor. Now, what is money? Not merely nor even chiefly, but only incidentally, a "medium of exchange": essentially, it is far more than this. Whether gold or silver or bank-notes, or even perhaps bonds, it is a *documentary* evidence of legal claims.

It is not wealth, but a documentary claim to wealth, being the sign of the relative quantities of it or of the labor producing it to which at a given time persons or societies are entitled.

If all the money in the world — notes and gold — were destroyed in an instant, it would leave the world neither richer nor poorer than it was. But it would leave the individual inhabitants of it in different relations.

Money is, therefore, correspondent in its nature to the title-deed of an estate. Though the deed be burned, the estate still exists, but the right to it has become disputable. . . . [*Munera Pulveris*, i.]

*The currency of any country consists of every document acknowledging debt which is transferable in the country.* [And a gold piece is as much a document as a bond.]

This transferableness depends upon its intelligibility and credit. Its intelligibility depends chiefly on the difficulty of forging anything like it; its credit, much on national character, but ultimately *always* on the existence of substantial means of meeting its demand. . . .

Legally authorized or national currency, in its perfect condition, is a form of public acknowledgment of debt so regulated and divided that any person presenting a commodity of tried worth in the public market shall, if he please, receive in exchange for it a document giv-

ing him claim to the return of its equivalent, (1) in any place, (2) at any time, and (3) in any kind.

When a currency is quite healthy and vital, the persons intrusted with its management are always able to give on demand either,

A. The assigning document for the assigned quantity of goods,  
Or,

B. The assigned quantity of goods for the assigning document.

If they cannot give document for goods, the national exchange is at fault.

If they cannot give goods for document, the national credit is at fault.

The nature and power of the document are therefore to be examined under the three relations it bears to place, time, and kind. [*Ibid.*, ii.]

And *cost* and *price* are commercial conditions, to be studied under the head of money. They are counted in *labor*. *Labor* is literally the quantity, "lapse," loss or failure of human life caused by any effort; the *suffering* in effort; "that quantity of our toil which we die in." And cost, "the quantity of labor necessary to obtain a thing, the quantity for which it 'stands' (*constat*); you shall win it, come at it, for no less than this." But its *price* is dependent on human will.

The price of anything stands on four variables: —

- (1) Its cost.
- (2) Its attainable quantity at that cost.
- (3) The number and power of the persons who want it.
- (4) The estimate they have formed of its desirableness.

Its value only affects its price so far as it is contemplated in this estimate; perhaps, therefore, not at all. [*Ibid.*, i.]

Demand and supply, it will be seen, are to fare hardly with Ruskin. He claims: first, that both wages and (largely) prices should be regulated artificially; second, that they *are* so regulated to a great extent. "I give my servants what I choose; nor do we offer prime minister-ships for sale at a Dutch auction." The costermongers *downset* the price of fish in London: if the supply becomes

dangerous, the surplus is destroyed. So Chicago beef-men fix the price of steaks in Boston, and close corporations or majorities the price of milk, and doctors' fees, and the wages of plumbers; and in free New England towns, of unskilled labor,—two dollars a day. "All that I want you to see is," cries Ruskin, "not only the possibility of regulating prices, but the fact that they *are* now regulated, and regulated by rascals, while all the world is bleating out its folly about Supply and Demand." And in his St. George's Utopia he bases the price of a day's produce on a day's maintenance, with due regard to surplus and requirements of the occupation; and will have machinery, mining, coal work, and steam work — not agriculture — done by criminals.

When we come to questions of land and rent, money and interest, capital and profits, Ruskin shares in the obscurity and self-contradiction that seem to possess all writers who are not visionaries, since and beginning with the later works of John Stuart Mill,—a cloud slow to lift because, of the underlying prospect, the world would fain yet be blind; although the result is always confusion and hypocrisy. This obscurity arises from the fact that we have reached the junction of two ways; and economists, at least, *do not dare* to choose. So simple is this question, so old and hackneyed; and yet not a legislator in Westminster or Washington that sees, or, if he sees, is true, to either side. Yet persistently now fate iterates the question, and inexorably shall the answer be demanded: *Do you recognize the right of private property, or do you not?* And then, pressing close on this, another and a darker question, whose answer largely hangs upon the first: *Do you recognize individual liberty* (so long as man commits no crime upon his fellows), *or do you not?*

Ruskin takes up Fawcett's definition: —

"We have described the requisites of production to be three,—land, labor, and capital. Since, therefore, land, labor, and capital are

essential to the production of wealth, it is natural to suppose that the wealth which is produced ought to be possessed by those who own the land, labor, and capital, which have respectively contributed to its production. The share of wealth which is thus allotted to the possessor of the land is termed rent, the portion allotted to the laborer is termed wages, and the remuneration of the capitalist is termed profit."

You observe that in this very meritoriously clear sentence both the possessor of the land and the possessor of the capital are assumed to be absolutely idle persons. . . .

But Professor Fawcett's sentence . . . yet is not as clear as it might be. It is, indeed, gracefully ornamental in the use, in its last clause, of the three words "share," "portion," and "remuneration" for the same thing; but this is not the clearest imaginable language. The sentence strictly put should run thus: "The portion of wealth which is thus allotted to the possessor of the land is termed rent, the portion allotted to the laborer is termed wages, and the portion allotted to the capitalist is termed profit."

And you may at once see the advantage of reducing the sentence to these more simple terms; for Professor Fawcett's ornamental language has this danger in it, that "remuneration" being so much grander a word than "portion" in the very roll of it seems to imply rather a thousand pounds a day than three and sixpence. And, until there be scientific reason shown for anticipating the portions to be thus disproportioned, we have no right to suggest their being so by ornamental variety of language.

Again, Professor Fawcett's sentence is, I said, not entirely scientific. He founds the entire principle of allotment on the phrase "it is natural to suppose," but I never heard of any other science founded on what it was natural to suppose. Do the Cambridge mathematicians, then, in these advanced days, tell their pupils that it is natural to suppose the three angles of a triangle are equal to two right ones? Nay, in the present case, I regret to say it has sometimes been thought wholly *unnatural* to suppose any such thing, and so exceedingly unnatural that to receive either a "remuneration" or a "portion" or a "share" for the loan of anything, without personally working, was held by Dante and other such simple persons in the Middle Ages to be one of the worst of the sins that could be committed *against* nature; and the receivers of such interest were put in the same circle of hell with the people of Sodom and Gomorrah. . . . [Fors, xi.]

Thus — at first hesitatingly, in his last writings utterly — Ruskin condemns all interest for loans. The fallacy

in his expressed argument is easily found. William borrows of James a plane January 1. He makes a plank, and uses up the plane in the year. On December 31, he returns James a new plane therefor—and a plank. On January 1, he borrows the new plane; and the process goes on as before. The “position of James” is that he gets a new plank every year; and Ruskin wastes endless irony on the position of the obliging, the “sweetest of possible Williams,” who gives it him. But why not? The plank *was not the only plank William made during the year*, as Ruskin tacitly assumes; and, as to James, suppose the plane had been an acre of land? Interest is the *rent* of unfixed capital. Will you forbid the rent of land? Then why not the purchase money? If a man can sell forever, cannot he sell for a year?

Interest and rent are both the logical consequence of the institution of private property. Ruskin, therefore, should attack this. But what does he say of private property?

The first necessity of all economical government is to secure the unquestioned and unquestionable working of the great law of Property,—that a man who works for a thing shall be allowed to get it, keep it, and consume it in peace; and that he who does not eat his cake to-day shall be seen without grudging to have his cake to-morrow. [*Munera Pulveris*, ii.]

I did, indeed, cut out a slip from the Birmingham *Morning News* last September (12th), containing a letter written by a gentleman signing himself “Justice” in person, and professing himself an engineer, who talked very grandly about the “individual and social laws of our nature; but *he* had arrived at the inconvenient conclusions that “no individual has a natural right to hold property in land,” and that “all land sooner or later must become public property.” I call this an inconvenient conclusion, because I really think you would find yourselves greatly inconvenienced if your wives couldn’t go into the garden to cut a cabbage without getting leave from the Lord Mayor and Corporation; and, if the same principle is to be carried out as regards tools, I beg to state to Mr. Justice-in-Person that, if anybody and everybody is to use my own particular palette and brushes, I resign my office of Professor of Fine Art. . . . [*Fors*, xi.]

And of land? Ruskin fully appreciates the problem. He speaks in *The Crown of Wild Olive* of "that beautiful arrangement of dwelling-houses for man and beast by which we have grouse and blackcock, so many brace to the acre; and men and women, so many brace to the garret." Yet in *Fors* he says, in answer to the question "Can the world—its oceans, seas, lakes, rivers, continents, islands, or portions thereof—be rightfully treated by human legislators as the 'private property' of individuals?" "Certainly. Else would man be more wretched than the beasts, who at least have dens of their own."

Land was obtained by force (see Fawcett, *Political Economy*, p. 112), and must be maintained by force. "It is the nearest task of our day to discover how far original title may be justly encountered by reactionary theft,—when excluding either, are the just conditions of the possession of land. . . . The British constitution is breaking faith. It never was, in its best days, entirely what its stout own flattered itself. Neither British constitutions nor British law, though it seal with as many seals as the meadow had buttercups, can keep your landlordships safe henceforward for an hour. You will have to fight for them, your fathers did."

Two merchants bid for the two properties, but not in the same terms. One bids for the people, buys *them*, and sets them to work under pain of scourge; the other bids for the rock, buys *it*, and throws the inhabitants into the sea. The former is the American the latter the English method of slavery. Much is to be said for something against both.

And latest of all (*Fors*, Aug. 31, 1880): —

I am obliged also to affirm the one principle which can, and in the end will, close all epochs of Revolution,—that each man shall possess the ground he can use, and no more,—use, I say, either for food, beauty, exercise, science, or any other sacred purpose; that each man shall possess for his own no more than such portion, with the further condition that it descends to his son inalienably, right of

mogeniture being in this matter eternally sure. The nonsense talked about division is all temporary. You can't divide forever.

By "primogeniture," Ruskin probably means, or we may modify it to mean, descent to the children (or, perhaps, the sons only \*) in common. And, further (October, 1884): "Possession of land implies the duty of living on it and by it. . . . The nonsense thought and talked about nationalization of land, like other nonsense, must have its day, I suppose, and I hope soon its night." In brief, Ruskin recognizes property in all things but land; and of land his views resemble Henry George's,—perhaps it would be truer to say are the source of Henry George's.

Rapidly passing over a few minor points of difference or agreement with the admitted economists, let us hasten to Ruskin's more radical writing,—his *constructive* chapters, his general social scheme:—

I am and always have been an utterly fearless and unscrupulous free-trader. . . . Let other nations, if they like, keep their ports shut. Every wise nation will throw its own open. It is not the opening them, but a sudden, inconsiderate, and blunderingly experimental manner of opening them, which does the harm. [*Unto This Last*, iv.]

The only honest and wholly right tax is one not merely on income, but property, increasing in percentage as the property is greater. [*Fora*, vii.]

The first beginnings of prosperity must be in getting food, clothes, and fuel. . . . All capital is imaginary and unimportant, except the quantity of food existing in the world at any given moment. . . .

Rent is an exaction by force of hand, . . . but had better at present be left.

Wealth . . . has been generally obtained by pillage of the poor [i.e., by the *engrossing* of their labor: see below].

\* Ruskin's views on women's rights may be conveniently mentioned here:

"Not only do you declare yourselves too indolent to labor for daughters and wives, and too poor to support them, but you have made the neglected and distracted creatures hold it for an honor to be independent of you, and shriek for some hold of the mattock for themselves. Believe it or not, as you may, there has not been so low a level of thought reached by any race since they grew to be male and female out of star-fish or chickweed, or whatever else they have been made from by natural selection, according to modern science."

Modern folly in supposing there can be overproduction. The power of machines. . . . They cannot increase the possibilities of life, but only the possibilities of idleness.

There are, in the main, two great fallacies which the rascals of the world rejoice in making its fools proclaim. The first is that, by continually exchanging and cheating each other on exchange, two exchanging persons, out of one pot, alternating with one kettle, can make their two fortunes. That is the principle of Trade. . . .

"No person whatsoever shall buy fish, to sell it again, in the markets of Florence." [And Ruskin desires such laws], entirely abolishing the profession of middle-man, or costermonger, of perishable articles of food.

We may now appropriately close this branch of the subject with the consideration of individual wealth,—i.e., riches,—which will naturally lead us to that moral view of political economy, in general, which chiefly distinguishes Ruskin from all save the earliest economists.

Now, *riches* is a relative term. There may be said to be two economies, says Ruskin: political economy,—the production, preservation, and distribution, at fittest time and place, of useful or pleasurable things; and mercantile economy,—the economy of *merces*, or pay, the accumulation in the hands of individuals of legal or moral claim upon or power over the labor of others, every such claim implying precisely as much poverty or debt on one side as it implies riches or right on the other. The product of the former economy is wealth; of the latter, riches. To become rich is "to establish the maximum inequality in one's favor." But such inequality cannot be shown in the abstract to be either advantageous or disadvantageous to the body of the nation. Suppose two sailors cast away: they work equally, and in several years obtain a hundred acres of cultivated land and a house apiece, certain stores and cattle. All these are wealth, *real* riches. Then one falls ill: he asks the other to sow and reap for him. "Certainly," says the latter, "but you must give a written promise to work as many hours for

me at any future time at any work I choose." What is the position of affairs when the invalid is able to resume work?

Considered as a state, they are poorer than before. Considered as individuals, the sick man has not only pledged his labor for a year or more, but has probably exhausted his own stores, and will be dependent on the other for some time for food, which he can only "pay" or reward him for by further written promises to labor. If these be held entirely valid (among civilized nations their validity is secured by legal measures), the well person may perhaps, if he choose, do no more work at all. He has acquired *riches*, the other is poor; yet the State has less *wealth* than before.

It will be seen what view Ruskin takes, when he applies this reasoning to a national debt; and how, in his positive or constructive economics, he is led to criticise it, and propose instead a "national store." But for the present let us stop at the conclusion "that the establishment of the mercantile wealth, which consists in a claim upon labor, signifies a political diminution of the real wealth, which consists in substantial possessions."

And success (while society is guided by laws of competition) *signifies always so much victory over your neighbor as to obtain the direction of his work, and to take the profits of it. This is the real source of all great riches.* No man can become largely rich by his personal toil. The work of his own hands, wisely directed, will indeed always maintain himself and his family, and make fitting provision for his age. *But it is only by the discovery of some method of taxing the labor of others that he can become opulent.* Every increase of his capital enables him to extend this taxation more widely; that is, to invest larger funds in the maintenance of laborers,—to direct, accordingly, vaster and yet vaster masses of labor, and to appropriate its profits. [*Munera Pulveris*, vi.]

Ruskin's father left him some two hundred thousand pounds, acquired by the "engrossing of labor" in Span-

ish vineyards. What has he done with this? His accounts of it with the English people will be found accurately set forth in *Fors*. He has spent it for his poor relations, for the encouragement of art, and directly for the public benefit,—so wholly spent it that not only will he leave no interest-breeding document to his heirs, but hardly, as it now seems, enough seemly to furnish forth his end. He admits a certain inconsistency in having taken rent or interest at all; but, on the whole, we cannot challenge him here.

### III.

To present Ruskin's own view of political economy, as understood by him, we must seek for sentences throughout his works, as he nowhere says all at once. Let us collect a few of the most important:—

Among the delusions which at different periods have possessed themselves of the minds of large masses of the human race, perhaps the most curious — certainly, the least creditable — is the modern *scientific* science of political economy, based on the idea that an advantageous code of social action may be determined irrespectively of the influence of social affection.

Of course, as in the instances of alchemy, astrology, witchcraft, and other such popular creeds, political economy has a plausible idea at the root of it. "The social affections," says the economist, "are accidental and disturbing elements in human nature, but avarice and the desire of progress are constant elements. Let us eliminate the inconstants, and, considering the human being merely as a covetous machine, examine by what laws of labor, purchase, and sale the greatest accumulative result in wealth is attainable. Those laws once determined, it will be for each individual afterwards to introduce as much of the disturbing affectionate element as he chooses, and to determine for himself the result on the new conditions supposed."

This would be a perfectly logical and successful method of analysis, if the accidentals afterwards to be introduced were of the same nature as the powers first examined. Supposing a body in motion to be influenced by constant and inconstant forces, it is usually the simplest way of examining its course to trace it first under the persistent conditions, and afterwards introduce the causes of variation.

But the disturbing elements in the social problem are not of the same nature as the constant ones; they alter the essence of the creature under examination the moment they are added; they operate not mathematically, but chemically, introducing conditions which render all our previous knowledge unavailable. We made learned experiments upon pure nitrogen, and have convinced ourselves that it is a very manageable gas. But, behold! the thing which we have practically to deal with is its chloride; and this, the moment we touch it on our established principles, sends us and our apparatus through the ceiling.

Observe, I neither impugn nor doubt the conclusions of the science, if its terms are accepted. I am simply uninterested in them, as I should be in those of a science of gymnastics which assumed that men had no skeletons. It might be shown on that supposition that it would be advantageous to roll the students up into pellets, flatten them into cakes, or stretch them into cables, and that, when these results were effected, the reinsertion of the skeleton would be attended with various inconveniences to their constitution. The reasoning might be admirable, the conclusions true, and the science deficient only in applicability. Modern political economy stands on a precisely similar basis. Assuming not that the human being has no skeleton, but that it is all skeleton, it founds an ossifant theory of progress on this negation of a soul; and having shown the utmost that may be made of bones, and constructed a number of interesting geometrical figures with death's heads and humeri, successfully proves the inconvenience of the reappearance of a soul among these corpuscular structures. I do not deny the truth of this theory: I simply deny its applicability to the present phase of the world. [*Unto This Last*, i.]

The above is the most concise statement to be found in Ruskin's works of that which I have termed the second of his economic labors. Elsewhere (*Fors*, xxx.), he has attempted a definition in fewer words: —

Food can only be got out of the ground, and happiness only out of honesty. . . .

But, as we have seen that Ruskin is more than a mere physiocrat, so we shall probably find that he is much more than an ordinary moralist.

Political economy, he furthermore says, is no science, because it has omitted the study of exactly the most im-

portant branch of the business,—the study of *spending*. Ultimately, you *must* spend as much as you make; and it is money's *worth*, not money, we are after. And, even for the making, industry, frugality, and discretion, the three foundations of economy, are moral qualities, and cannot be attained without moral discipline,—a flat truism, yet one vociferously denied by the entire populace of Europe, who are at present hopeful of obtaining wealth by tricks of trade, have lost the very conceptions of frugality, and have never possessed the faculty of discretion.

Having established what is *wealth*, we are now to inquire respecting *riches*: first, into the advisable modes of their collection; second, into the advisable modes of their administration. And, as to collection, we must first inquire if we are justified in calling a nation rich if the quantity of wealth be large, irrespectively of the manner of its distribution, or whether a certain mode of distribution of the riches or their operation enters into our conceptions; and, second, whether the inequality, which is the condition of riches, has been established by increase of possession on the one side or by decrease of it on the other,—whether the correlative property was produced by being surpassed only, or by being depressed also. And, as to the administration of riches, their possession involves three great economic powers,—those of selection, direction, and provision. Since the rich have power to choose, the business of the economist is to show how this choice may be a Wise one. Since, ultimately, in one way or another they acquire the direction of or authority over the labor of the poor, both mental and bodily, the business of the economist is to show how this direction may be a Just one. And since the power of Provision is dependent upon the redundancy of wealth, whence capital,—i.e., bread or source-material,—the economist has to show how this may be a Distant (far-sighted) one.

Ruskin is well known — as a single bit of misinformation may always be well known — to be a person not fond of steam machinery and liking pictures. And he is commonly understood to have applied one to the other, and so mixed up this taste and this distaste in a hopelessly illogical way. As he himself complains,—

The hacks of English art and literature wag their heads at me, and the poor wretch who pawns the dirty linen of his soul daily for a bottle of sour wine and a cigar talks of the “effeminate sentimentality of Ruskin.”

The fact is, machinery has no necessary connection with Ruskin's *economy*, one way or the other; and, so far as Mr. Ruskin has an *economic* objection to it, his own logic is at fault,—using *economic* in its narrow sense. But, nevertheless, the question of machinery and manufactures will serve as a convenient starting point from which to view (1) the collection, (2) the administration, of riches, as set forth above.

Now, why does he object to machines,—their working, their product, their results? The question almost suggests its answer. Not because corn-reaping machinery does not increase the possibilities of productive labor, but only those of idleness; for this, as I have said, involves a fallacy,—his day's work done in fifteen minutes, the farmer may paint pictures; nor because “it is in the greater increasing power of production and distribution, as compared with demand, enabling the few to do the work of the many, that the active cause of the wide-spread poverty among the producing and lower middle classes lay,” for this is, as Ruskin says, accurately the most foolish thing that has been said in all the ages.

He objects to their *working*, as we all do, more or less,—is there any one who regards a steam-engine as a good in itself?—because they consume pure air and earth and water, the three material things most needful in support of

life, and therefore (as both he and Herbert Spencer say things of truest *value*; and because they oppose beauty both of nature and the human soul, destroying thus the three ideal things of greatest *value* (Ruskin would claim strictly in the same sense *value* as before), which are admiration, hope, and love.

He objects to their *produce* as, in the main, not *useful* — of no physical value (if all their machines and all their railways and appliances could produce so much as one poor grain of corn!) and of no ideal value, because no food for the soul; a product we were better all without; *supply* for any false or foolish *demand* that England can provoke the itch for elsewhere in the world.

He objects to their *results*: first, in the nation, of which it makes a nation of slaves in labor and of fraud in trade; second, in the workmen, who are, or tend to be, most miserable in mind and body of all time, most stunted in soul and their masters most corrupt. For it is *manufacture* that encourages the engrossing of labor and the setting to any false or foolish work,— cannon or worthless cotton cloth, bayonets or filigree,— that capital may levy its percentage thereupon.

Ruskin would not object to machines, even steam, if they were really necessary, or that produced things of value though preferring water power and wind to coal:—

The first question, . . . “What store has it?” is one of equal importance, whatever may be the constitution of the State; while the second question — namely, “Who are the holders of the store?” — involves the discussion of the constitution of the State itself.

The first inquiry resolves itself into three heads:—

1. What is the nature of the store?
2. What is the quantity in relation to the population?
3. What is its quantity in relation to the currency?

The second inquiry into two:—

1. Who are the Holders of the store, and in what proportions?
2. Who are the Claimants of the store (that is to say, the holders of the currency), and in what proportions? . . .

QUESTION FIRST. What is the nature of the store? Has the nation hitherto worked for and gathered the right thing or the wrong? On that issue rest the possibilities of its life. [*Munera Pulveris*, ii.]

Thus, on the one hand, Ruskin places a society occupied in procuring and laying up store of corn, wine, wool, silk, and other such preservable materials of food and clothing, and on the other the enormous part of the most earnest and ingenious industry of the world, which is spent in producing munitions of war. Or, to take the famous comparison, at the beginning of *The Crown of Wild Olive*, of the spring at Carshalton with the public house in Croydon; the useless iron railing in front of the public house "represented a quantity of work which would have cleansed the Carshalton pools three times over,"—

Of work partly cramped and deadly in the mine, partly fierce and exhaustive at the furnace, partly foolish and sedentary, of ill-taught students making bad designs; work from the beginning to the last fruits of it, and in all the branches of it, venomous, deathful, and miserable. Now, how did it come to pass that this work was done instead of the other, that the strength and life of the English operative were spent in defiling ground instead of redeeming it, and in producing an entirely (in that place) valueless piece of metal, which can neither be eaten nor breathed, instead of medicinal fresh air and pure water? . . .

Half a dozen men, with one day's work, could cleanse those pools, and trim the flowers about their banks, and make every breath of summer air above them rich with cool balm, and every glittering wave medicinal, as if it ran, troubled of angels, from the porch of Bethesda. But that day's work is never given, nor will be; nor will any joy be possible to heart of man, for evermore, about those wells of English waters. . . .

There is but one reason for it, and at present a conclusive one,—that the capitalist can charge percentage on the work in one case and cannot in the other. . . .

On any given farm in Switzerland or Bavaria, fifty years ago, the master and his servants lived in abundance on the produce of their ground without machinery, and exchanged some of its surplus produce for Lyons velvet and Hartz silver (produced by the unhappy mechanists and miners of those localities), whereof the happy peas-

ant made jackets and bodices, and richly adorned the same with precious chain-work. . . .

That is entirely healthy, happy, and wise human life. Not theoretical or Utopian state at all. . . .

And now examine the facts about England in this broad light.

She has a vast quantity of ground still food-producing in corn, grass, cattle, or game. With that territory she educates her squire or typical gentleman, and his tenantry, to whom together she owes all her power in the world. With another large portion of territory—now continually on the increase—she educates a mercenary population, ready to produce any quantity of bad articles to anybody's order,—population which every hour that passes over them makes acceleratingly avaricious, immoral, and insane. In the increase of that kind of territory and its people, her ruin is just as certain as if she were deliberately exchanging her corn-growing land and heaven above it for a soil of arsenic and rain of nitric acid. . . .

But the root of all the mischief is not in Arkwrights or Stephensons, nor in rogues or mechanics. The real root of it is the crime of the squire himself. . . .

The action of the squire for the last fifty years has been, broadly, to take the food from the ground of his estate and carry it to London, where he feeds with it a vast number of builders, upholsterers . . . carriage and harness makers, dressmakers, grooms, footmen, bad musicians, bad painters, gamblers, and harlots, and, in supplying the wants of these main classes, a vast number of shopkeepers and minor useless articles. The muscles and the time of this enormous population being wholly unproductive [for, of course, time spent in the mere process of sale is unproductive, and much more that of the footman and groom; while that of the vulgar upholsterer, jeweller, fiddler, and painter, etc., is not only unproductive, but mischievous], the entire mass of this London population do nothing whatever either to feed or clothe themselves. . . .

Now, the peasants might still be able to supply this enormous town population with food (in the form of the squire's rent); but they cannot, without machinery, supply the flimsy dresses, toys, and other work, and other rubbish belonging to their accursed life. Hence, over the whole country, the sky is blackened and the air made foul, to supply London and other such towns with their iron rails, vulgar upholstery, jewels, toys, liveries, lace, and other means of corruption and dishonor of life. Gradually, the country people cannot even supply food to the voracity of the vicious centre; and it is necessary to import food from other countries, giving in exchange for that kind of commodity we can attract their itching desires for and

duce by machinery. The tendency of the entire national energy is, therefore, to approximate more and more to the state of a squirrel in a cage, or a turnspit in a wheel, fed by foreign masters with nuts and dog's-meat.

And again and again Ruskin terms these servants and mechanics and miners slaves,—slaves of the farmers and the landlords, to whom they must go for things of real value, products of pure air, water, and earth; slaves of the artist, to whom they go for works of real value, producing admiration, hope, and love.

And elsewhere Mr. Ruskin gives us a shorter phrase, which, while it were quite unjust to call it an epitome of all this, may yet serve as a catchword: "The greatness of England does not consist in coal. . . . I wish still to keep her fields green and her cheeks red."

So much for the broad view, the national point of view. And now for distribution and the social system. Such fortunes (*Time and Tide*, letter xv.) as are now the prizes of commerce can be made only in one of three ways,—by obtaining command over the labor of multitudes of other men and taxing it for our own profit, by treasure-trove (as of mines, useful vegetable products, and the like, in circumstances putting them under our own exclusive control), and by speculation (commercial gambling). And, as to spending, a man's power over his property is, at the widest range of it, fivefold. It is power of Use for himself, Administration to others, Ostentation, Destruction, or Bequest; and possession is in use only, which for each man is sternly limited. He would have us spend in food, in clothing, in beauty of surroundings, in healthy play, in land, both for use and (within limits) for beauty, and indefinitely in art, but not employ labor in mere domestic service, nor in ostentation, nor in brutal or debasing work, which should be left to the lowest and to criminals.

Ruskin thinks that all ill things work together for fur-

ther ill, that it is not by chance that *productive* labor (which is mostly agriculture, *good* weaving, and art) is far more difficult to engross or accaparize, that it also leads both to things of real value and to health of body and soul, that it both does away poverty and strengthens and better the character; and that the "moral element" for which he is sneered at is still the economic right. His reasoning in this is strikingly of a piece with passages in Spencer's *Man versus the State*:—

It is always the interest of both master and servant that the work should be rightly done and a just price obtained for it; but, in the division of profits, the gain of the one may or may not be the loss of the other. It is not the master's interest to pay wages so low as to leave the men sickly and depressed, nor the workman's interest to demand paid high wages if the smallness of the master's profit hinders him from enlarging his business or conducting it in a safe and liberal way; . . . and the varieties of circumstances which influence these reciprocal interests are so endless that all endeavor to deduce rules of action from balance of expediency is in vain. And it is meant to be in vain. . . . *No man ever knew, or can know, what will be the ultimate result to himself or to others of any given line of conduct; but every man may know, and most of us do know, what is a just and unjust act.*

*Laissez faire*, we might say, Mr. Ruskin, after all? If he would reply, *faites faire*. "The essential thing for all creatures is to be made to do right. *How* they are made to do it does not matter, by pleasant promises or by hard necessities," — by education, if you can, but, if not, then boldly by the whip, by government. "It has been the great error of modern intelligence to mistake science for education. You do not educate a man by telling him what he knew not, but by making him what he was not."

#### IV.

So we are brought to Ruskin's social scheme,—but those things he would do in the world as it now exists and those he would do in his St. George's Utopia. The rest must be dismissed in a few words.

Writing in 1874, to give an abstract of the first seven letters in *Fors*, he says, "Men's prosperity is in their own hands, and no forms of government are in themselves of the least use." And, again, in 1871, "I am, and my father was before me, a violent Tory of the old school." And, again, in *Munera Pulveris* (p. 88): "Note finally that all effectual advancement towards this true felicity of the human race must be by individual, not public effort. Certain general measures may aid, certain revised laws guide, such advancement; but the measure and law which have first to be determined are those of each man's home." But (and for the necessity of this *but*, as well as for the curious instruction to be gained by comparing two writers herein radically disagreeing and yet with many ideas and aims in common, the reader may be referred to Spencer's *Man versus the State*), in *Time and Tide*, he said,—

The Americans as a nation set their trust in liberty and in equality, of which I detest the one and deny the possibility of the other; and because, also, as a nation, they are wholly undesirous of Rest, and incapable of it; irreverent of themselves both in the present and in the future; discontented with what they are, yet having no ideal of anything which they desire to become, as the tide of the troubled sea—when it *cannot* rest.

Yet in modern place, in Herbert Spencer's parlance, as between English radicals and individualist conservatives, as between Bismarck and German national liberals, Americans are Tories in the main. So Ruskin says again:—

If there be any one point insisted on throughout my works more frequently than another, that one point is the impossibility of equality. My continual aim has been to show the eternal superiority of some men to others, sometimes even of one man to all others; and to show also the advisability of appointing more such persons or person to guide, to lead, or, on occasion, even to compel and subdue their inferiors. . . .

Government and co-operation are in all things the laws of life; anarchy and competition, the laws of death.

[And, again,] instead of saying you *have a right* to a thing, it will serve to clear your minds to say, in future, you *deserve* a thing. . . .

Of all attainable liberties, then, be sure first to strive for leave to be useful. Independence you had better cease to talk of; for you are dependent, not only on every act of people whom you never heard of who are living around you, but on every past act of what has been dust for a thousand years.

In short, Ruskin is a socialist, a socialist, indeed, of Bismarck's school, and not a democratic one, but still a socialist. Yet some things may be learned from those that he would have us do; for the *what* may be attempted by any individualist, it is only in the *how* that we diverge. And, indeed, Ruskin himself, in his St. George's Guild, has sought to work in what we all may admit to be the proper way, by voluntary action. And, if he has failed in this concrete attempt, it is for forgetting what he himself has elsewhere well set forth: that one man cannot find both the word and the deed, that the word must be found long ages ere the world is ready for the deed. Just as he himself has taken interest and dividends, while not believing in them, and has said that rent, though wrong, had for the present better be allowed, so even we, who disagree with much, may yet hope to see the truth that may be in his teaching broaden,—from precept to example, and from example to custom, and from custom even to law, not by State experiment, but by individual education, education in Ruskin's own sense, teaching men to do good work only, and that honestly; in his own words, "to be brave for the help of Man, and just for the love of God."

Insensibly, inevitably, we recur to Ruskin as a moralist; and it is perhaps in this capacity that posterity will chiefly take him. Let us, nevertheless, recapitulate what merits we have found in his political economy, to which alone this article has, so far as possible, been limited. We are likely to see with the practical failure of St. George's Guild a reaction against its master; and also from the

irritability and exaggeration that may accompany his closing years, and from his mental infirmities, an argument drawn by the dull against the sanity and truth of the teaching of his health and youth. In a letter written February 8, 1880 (*Fors*, No. 4, New Series), Ruskin seems to feel this, and asks the world to forgive him for his imagination, for his poetry, for his caprice of style, his digressions, his egotism, and for his going mad.

They [the doctors] made and still make my friends more anxious about me than there is occasion for, which anxiety I partly regret, as it pains them; but much more if it makes them more doubtful than they used to be (which, for some, is saying a good deal) of the "truth and soberness" of *Fors* itself, throughout every syllable of which, hitherto written, the reader will find one consistent purpose and perfectly conceived system, far more deeply founded than any bruited about under their founders' names; including in its balance one vast department of human skill,—the arts,—which the vulgar economists are wholly incapable of weighing, and a yet more vast realm of human enjoyment,—the spiritual affections,—which materialist thinkers are alike incapable of imagining: a system not mine nor Kant's nor Comte's, but that which Heaven has taught every true man's heart, and proved by every true man's work, from the beginning of time to this day. . . .

All this effort or play of personal imagination is utterly distinct from the teaching of *Fors*, though I thought at the time its confession innocent. . . .

The doctors said that I went mad, this time two years ago, from overwork. I had not been then working more than usual, and what was usual with me had become easy. But I went mad because nothing came of my work. People would have understood my falling crazy if they had heard that the manuscripts on which I had spent seven years of my old life had all been used to light the fire with, like Carlyle's first volume of the *French Revolution*. But they could not understand that I should be the least annoyed, far less fall ill in a frantic manner, because, after I had got them published, nobody believed a word of them. Yet the first calamity would only have been misfortune, the second (the enduring calamity under which I toil) is humiliation, resisted necessarily by a dangerous and lonely pride.

Premising, therefore, that we will not consider all his writings madness should Mr. Ruskin be next year insane, let us recapitulate what we have found.

We have found that the one great change he has wrought into orthodox economy—a change not to be neglected nor forgotten in the future—is in the element of *value* and in the other economic conceptions of which it is a factor, such as wealth, riches, and productive labor. Other ordinary economic questions Mr. Ruskin has treated with varying success: some, instructively, like money, riches, and debt; some, doubtfully, like interest, rent, and land. In so far as it is not original, his writing seems to be based on the classics and the French physiocrats of the last century. In so far as Mr. Ruskin has transcended the scope marked out for him by Smith and Mill, he has written always suggestively, with originality, and frequently with logic and force; and, in both these fields of study, he has been in general consonance with the lines of the general economic thought of his time. For one thing, he has, as it seems, most notably of all who have attacked it, overthrown and destroyed that figment of the orthodox imagination, the “economic man.”

Even in his most widely advertised and popularly distrusted antipathy to steam and manufactures, he is not now out of step with the van of modern thought. Others than Ruskin have appreciated the national evil, many others have felt the social evil, of a purely manufacturing civilization, of huge mills and factory towns. John Randolph said that he so hated manufactures that he “would travel three miles out of his road to kick a sheep”; and this is but a picturesque exaggeration of what, in Randolph a prejudice, has become with others a belief. Many social philosophers, with broad enough minds to see with Carlyle that that yet may be slavery to which nature as a last word contemptuously throws a bag of gold, have deplored, while they failed to see an escape from, the

massed humanity of the cotton mill, the foul congestions of the factory town. Many "practical" men have not failed to think and say that the slaves of steam, the vast aggregations of working units, who hopelessly, monotonously, serve in petty ways the master Power, are in danger of having their bodies degraded, their ambitions stifled, their hearts corrupted, and their souls debased. A friend of the writer lately made a long journey with a carload of criminals, condemned to imprisonment for life. What, he was asked, was the most common expression of their faces and their characters? Not, he replied, that they were born different from others, but that no work had ever been set before them by which *their ambitions were aroused*. Now, this cannot be said of a nation, even in the so-called barbarous times, of shepherds, soldiers, sailors, nor to-day of artists, artificers, *individual* trades. Thus it is that, despite Ruskin's trend to socialism, the secret of his thought on the silk-worm civilization of modern England is that it enslaves the individual and destroys his soul.

In his general social scheme, Mr. Ruskin has been less practical, and at the best can be hardly called more than interesting and suggestive. His logic and general cogency are damaged by a certain cloudiness and inconsistency between his ideas of property and rights to land, of progress by education or individual effort and progress by State socialism, which, in his case, means despotic government. Yet even here he is hardly out of touch with the much advertised German or "historical" school.

His imagination and his humor pardoned, his digressions and unpractical speculations overlooked, it may be fair to say that the rest of his economic writing present thinkers may do well to read; for, though the future political economy may not build from him directly, yet it will be rather with Ruskin's earth than with Ricardo's straw that its bricks for building shall be made.

F. J. STIMSC

## NOTES AND MEMORANDA.

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IN the course of the discussion on Mr. Goschen's budget for the current year, he made a statement as to the present value of the shares in the Suez Canal owned by the English government. It will be remembered that Mr. Disraeli's government in 1875 paid for the 176,602 shares about £4,000,000. At the present rates, Mr. Goschen pointed out, the shares are worth £10,500,000, so that the use to be made of the property when the government comes into the full enjoyment of the dividends is now an important question. Mr. Goschen was of opinion that it might be turned to account in solving the financial problems connected with the national defences. Investments made by government are not so uniformly fortunate as to make this case uninteresting. Its peculiarity is also heightened by the fact that, when the purchase was made, the real value of the shares was seriously questioned by those most accustomed to estimate such property. Of this evidence may be found in the comments made on the purchase by the *Economist*, December 4, 1875. The same issue contains a full statement of the details of the purchase.

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THE twentieth annual meeting of delegates from the various British co-operative societies was held at Dewsbury in May. The usual figures, based on the returns to the Registrar, were presented, and showed the same slow though steady progress which has been going on during the last twenty years. The figures for 1886 and 1887 were, in round numbers:

	<i>Number of Societies.</i>	<i>Members.</i>	<i>Shares.</i>	<i>Sales.</i>	<i>Profits.</i>
1886	1,409	912,000	£9,504,000	£32,533,000	£3,136,000
1887	1,432	946,000	£10,012,000	£34,190,000	£3,193,000

Almost the whole of these large transactions, as will be readily understood, was carried on by distributive societies. One unexpected fact was ascertained from the replies to a

question which was sent out this year for the first time. The question related to the extent to which credit was given; and it appeared that, of 1,255 societies in Great Britain, no less than 721 gave credit in some form. It was stated that, in the course of 1887, fourteen new societies for production in England had registered, and one in Scotland. In 1886, the total number registered had been thirty-eight in England and four in Scotland. But these returns have never made clear how many of the societies registered as productive societies are real experiments in that direction. Several attempts at co-operation in agriculture were noted, but none could be spoken of in a hopeful tone. The Assington Farming Association, of which much has been heard in economic literature in recent years, still reports a loss, though not so great a one as in past years. The loss for 1887 was £87, against an average of £310 for the three years preceding.

Not the least noteworthy event of the congress was the discussion of two papers on the relations which should exist between wholesale societies and societies for production. One of these papers argued that the former should aid the productive societies. The other advised them to maintain relations of perfect independence. In the lively debate on these papers, it appeared that the present relations between these two classes of associations are strained. The wholesale societies alleged that the productive associations often did not make the grade of articles wanted by the customers of the wholesale societies, and that, moreover, they had not always been faithful to their agreements. On the other hand, it was charged that the wholesale societies had not aided the productive societies with capital; and it was also said — though it is not easy to see how this bears on the precise question in debate — that they did not completely carry out co-operative principles, because, with the exception of the Scottish wholesale, they gave no share in profits to their employees. The general feeling was strongly against the attitude of “perfect independence” and strongly in favor of aid to the productive societies from the capital and connections of the wholesale societies. The ground for this feeling was very likely the belief expressed by one delegate: that, if something of this sort were not done,

"the death-rate would be equal to the birth-rate among their productive societies."

Some remarkable facts as to the probabilities of success in a New England manufacturing town were given by Hon. J. H. Walker, of Worcester, Massachusetts, in an address delivered by him before the Young Men's Christian Association of that city in March last. Mr. Walker's subject was "Opportunities in Life open to Young Men, and Conditions of Success"; and, in presenting it, he gave the following results of an investigation conducted with personal knowledge of individuals and their history:—

The number of individuals engaged in the eight leading manufacturing industries in Worcester in 1840 was 80:—

28 began as journeymen.

3 only were sons of manufacturers.

14 of the 80 failed.

14 died or retired from business, with property.

Only 3 of the sons of the 80 now have any property, or died leaving any.

The number of individuals engaged in the ten leading manufacturing industries in 1860 was 75, of whom 68 began as journeymen.

6 only were sons of manufacturers.

41 of the 75 failed.

30 died or retired, with property.

Only 6 of the sons of the 75 now have any property, or died leaving any.

The number of individuals engaged in the eleven leading manufacturing industries in 1880 was 107, of whom

101 were journeymen.

6 only were sons of manufacturers.

48 of the 107 failed.

60 died or retired, with property.

8 only of the sons of the 107 now have any property, or died leaving any.

The number of individuals engaged in the ten leading manufacturing interests in 1878 was 176, of whom

162 began as journeymen.

15 only were sons of manufacturers.

[This is too recent a date to complete the statistics, as the history is not yet made.]

The remarkable statement as to the small proportion of manufacturers who are succeeded by their sons is vouched for by Mr. Walker, as regards Worcester, from his own knowledge.

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IN the *Economist* for June 16 and 28 may be found some discussion by correspondents of a proposed gold standard for India. The present scheme comes from Mr. Leslie Probyn, for many years an Indian financial officer. Starting from the accepted theory that a great amount of gold has been absorbed by India in the course of a generation, and practically withdrawn from circulation, Mr. Probyn seeks for some means of making this gold a basis of currency without disturbing the silver circulation. He proposes to this end that the Indian mint should convert gold for all comers into standard bars, worth £1,875 each, and that four bars should be a legal tender for 100,000 rupees. The owner of the gold thus converted into legal tender bars may, at his option, receive from the government in their stead a note or certificate redeemable in gold bars or in silver rupees, as he may prefer. The government is also to receive at its offices gold in small quantities as well as large, and to give in exchange silver rupees or rupee notes at the rate of one rupee for 1s. 6d.; and the mint is then to be closed for all coinage except on government account.

The scheme appears to contemplate making the rupee a token currency by limiting the coinage to government account, and holding it in a fixed relation to gold bullion, which would be the real standard. In Mr. Probyn's opinion, it is essential that this standard should be in the form of bars rather than of a gold coinage. The latter he believes would be hoarded on a great scale, and would defeat the object. The proposed deposit of bars he believes would call out a large amount of gold now invisible and idle, and make it available in a form not inviting for private hoards.

The effect of the proposed measure, however, on the habits of hoarding among the native populations is a point on which there is a sharp difference of opinion. In this as in every other Indian question there is a controlling psychological element, which no amount of reasoning or experience can ever make completely intelligible to a Western mind.

## THE DISTRIBUTION OF PRODUCTS.

I have been gratified to find in the April number of this *Journal* what purports to be a review of my *Essay on the Distribution of Products*, by Mr. Frederick B. Hawley. I have been hoping that some competent person, possessing sufficient leisure, would take up the line of investigation undertaken by myself and presented by me as a partial and not fully conclusive statement, who would attempt to measure by some other method than my own the probable annual product of this country, the average proportion to each person occupied for gain, and the probable savings or additions to capital in a normal year. I have been more anxious for this, since my book is now passing into a fourth edition and is attaining a wide circulation.

But I am not content with Mr. Hawley's review, for the reason that it is quite apparent that he has not carefully read the essay which he undertakes to review. The evidence of this is very clear. For instance, after giving one of my tables, he says, "The total commercial product is estimated *from the census returns*, a difficult matter, as in those returns many values are counted twice or more; i.e., first as raw materials, and then as part of the value of the finished goods, and values are computed at wholesale; whereas, for the purpose of this comparison, they must be computed at retail prices."

Now, it happens that I distinctly state in the book that *I have not estimated the commercial product from the census returns*, that I reached my conclusions by the application of entirely different methods; and I express the same reason for *not* depending upon the census returns which Mr. Hawley gives, merely making use of them as far as they would go, to show that they came probably to the same result. Mr. Hawley accepts the result in part and apparently agrees with me as to the actual wage-fund or that part of the annual product which is distributed in the form of wages. He does not give his own reasons or methods of justifying these figures and I am therefore unable to determine whether his concurrence is of any value or not.

The point on which Mr. Hawley differs with me is in the assignment of only ten per cent. as the addition to the capital of the nation. Herein, again, he shows that he has not read the essay or taken cognizance of my figures. He substitutes a computation of his own, in which he makes a guess unsustained by any authority, as to the income of the capitalist class. He has entirely failed to observe that I have stated that the income of capitalists, or employers, and middle-men comes to a much larger sum than the actual addition to the capital of the nation. A large part of their income is distributed by them among other wage earners than those engaged in primary production, by whom its value is consumed.

The computation which Mr. Hawley sets up is slightly amusing. He observes that in the list of occupations of the people of the United States "there are something over 4,000,000 persons employed in professional and personal service, the value of whose labor does not appear in the value of any material product whatever." These persons, as he guesses, sell their service at an average of \$300 a year. "This," he says, "would give us a sum for personal service amounting to \$1,200,000,000, which is just as much a part of the yearly product of the nation as the \$10,000,000,000 of material products recognized by Mr. Atkinson."

He then computes \$800,000,000 as the service of wealth,—i.e., "horses and animals kept for pleasure, railways and telegraph companies to the extent in which they are used for other than business purposes, together with the services performed for us by various other forms of accumulated wealth"; and having thus made a guess amounting to \$1,200,000,000 and \$800,000,000, or in the aggregate to \$2,000,000,000, he adds this sum to my computation of the annual product, and assigns it as an increment of addition on capital, or whatever else he may call it. That is to say, Uncle Sam, omitting odd millions, makes a product worth \$10,000 a year in all: of this, according to my figures, he saves \$1,000, and adds it to his capital. "Oh, no," says Mr. Hawley, "he employs several servants, keeps horses for pleasure, and rides in a palace car, all of which we must compute at \$2,000 a year; and this forms a part of his income, and must be added to his gains."

This is an invention for which Mr. Hawley ought certainly to apply for a patent. If he can instruct a man whose income is \$10,000 a year, and who barely succeeds in saving \$1,000, how to add to his capital \$2,000 a year for what he has spent for domestic service, for pleasure horses, and the like, I think he would be able to get a very large income from the use of his patent. For myself, I am unable to conceive where the money is to come from for "services which are based on no material product whatever."

It is wholly consistent with the position taken by myself that a capitalist shall receive ten thousand dollars worth of the annual product as his income; that he and his family shall expend seven thousand dollars worth for subsistence; that he shall spend two thousand dollars for professional and personal service; and that he shall save, or add to his capital, only one thousand dollars. The last sum represents the gain, or addition to the capital, of the nation through the intervention of this man. The whole ten thousand dollars worth comes out of the gross annual product, whatever it may have been in its total value. The capitalist has directed the distribution of nine thousand dollars worth in a way in which it has been consumed by himself and those who serve him; while ten per cent., or one thousand dollars worth, has been directed by him in such a way as to add so much to capital which will become a force in future production.

I had intended to send a more complete rejoinder to Mr. Hawley's review of what he has incorrectly assumed to be the substance of my essay; but, in undertaking it, I have been led into an extension of the work of such a kind that it would have been hardly suitable for the *Journal*. A series of articles suggested by this review of Mr. Hawley's will therefore soon appear in the *Forum*.

Yours very truly,

EDWARD ATKINSON.

Boston, June 14, 1888.

## BUSINESS PROFITS AND WAGES: A REJOINDER.\*

Having no taste for mere controversy, I propose to leave my share in the issue between the old and new theories of wages and profits to stand, in the main, as it now stands. My object in troubling the readers of this journal again is not to rebut in detail the replies of Professor Marshall and President Walker, but to say a few words that seem to be called for by way of clearing up the true issues in the case. For the rest, I gladly leave those who have honored me by reading my former paper to decide for themselves how far the replies constitute a satisfactory defence of the new doctrines.

Mr. Marshall selects for reply two points,—one under the head of wages, the other under profits. In relation to wages, he cites the noted passage in which Cairnes contends that, under certain conditions, “the wages fund may contract as the supply of labor expands.” It is no concern of mine to defend Cairnes. While his proposition, as he puts it, is incontrovertible, it seems to me to relate, not to practical affairs, but to a purely hypothetical case.† On the practical question involved, I am in agreement with Mr. Marshall, though for a reason different from his. How he should have taken this for “the crucial point of difference between us,” I am at a loss to see. The chief objection I urged against his theory of wages is its want of accordance with the plain facts of the case. One of the most elementary facts of wage-paying is that wages are drawn, by the act of saving, from every sort of income,—

- \* See “The Source of Business Profits,” by  
F. A. Walker, in this journal, April, 1887;
- “The Theory of Business Profits,” by  
Alfred Marshall, *ibid.*, July, 1887;
- “Theory of Business Profits,” by  
S. M. Macvane, *ibid.*, October, 1887;
- “The Rate of Interest and the Laws of Distribution,” by  
Sidney Webb, *ibid.*, January, 1888;
- “Wages and Profits,” by  
Alfred Marshall, *ibid.*, January, 1888;
- “A Reply to Mr. Macvane: On the Source of Business Profits,” by  
F. A. Walker, *ibid.*, April, 1888.

† Cairnes is speaking of a case in which the number of laborers increases without increase of capital. Such a case is very unlikely to arise, since the attendant fall of wages tends of itself to stimulate employers to increased saving.

from rents, interest, earnings of management, and even from ordinary wages, as well as from the replaced principal of old accumulations. Yet Mr. Marshall attempts to find the measure of wages at any particular time by a process which leaves no room for new savings, thus going far beyond the extremest form of the wages-fund doctrine in the direction of stereotyping the volume of wages once for all. If the only source of wages be what he calls the wages-and-profits-fund, and if wages be determined by "sharing" this fund according to economic law, then the aggregate of wages can never change. Here it is that, as I tried to show, the really crucial point of difference lies between Mr. Marshall and myself; and I supposed that, if he took any notice of my criticism, he would see the importance of addressing himself to that point; yet he passes it by in silence.

The point of which he does speak is of slight consequence between us, since we agree in holding that individual wages may be expected to fall, when the number of laborers in a country is increased. We should differ, if at all, only as to the extent of the fall and the quickness of the recovery,—subordinate questions, surely. Yet, as Mr. Marshall thinks our variance at this point important, I will state briefly my reason for thinking his defence of his position insufficient. His thesis is that, when new laborers arrive in a country, their labor at once increases the consumable products constituting the wages-and-profits-fund, thereby providing the means for paying their wages. My contention, on the other hand, is that the first effect of the new labor must be to increase the capital of the country, to provide more plant, more materials, and larger stocks of commodities in exchange. The increase of consumable product available for wages I hold to be a comparatively slow process,—a result to be built up from the foundation. Mr. Marshall asserts that it can happen at once. He says:—

The moment the laborer is set to work, more partly finished processes of production are finished than would otherwise have been the case, more processes just begun are carried a little further, more new processes are begun. Though the spinner cannot get as his wages to-day the carpet that will be made of the yarn which he spins to-day,

there are pretty sure to be enough carpets in store to meet the increased demand due to the increased aggregate of wages which, in my belief, there would be; and manufacturers and dealers, knowing that larger supplies than before are being made, will not hesitate to sell freely from their stocks.

This seems to me a begging of the question. It obviously assumes that the productive arrangements of the country were on a scale adapted to a larger number of laborers than previously were found in it. The new laborers find all the requisite plant and materials awaiting their arrival. They have only to take their places in the system, and everything will move forward just as if they had always been there.

I supposed we were discussing a case in which the industrial arrangements existing before the arrival of the new laborers were assumed to be properly adjusted to the old force of laborers. On that assumption,—the only assumption worth considering, as it seems to me,—I ask where the new laborers are to find the additional farms, the additional machinery of all kinds, and the additional materials in various stages of growth and production requisite for enabling them to add appreciably at once to the stream of finished products. Where, in Mr. Marshall's illustration, is the spinner to find the wool and the machine to spin it with? Does he, after all, only displace another spinner? Does he only convert into yarn a little sooner wool that, in the regular course of things, would have been turned into yarn by the old spinners as rapidly as new supplies came forward? Will the wool supply suffice for the larger force of spinners until the production of wool can be increased? These questions I must leave for Mr. Marshall to answer. If he should answer them in the way his theory seems to require, it is to be hoped he will state clearly what he regards as the limit of this elastic quality of productive systems, whereby they may be stretched at once so as to accommodate additional laborers. I suspect that Mr. Marshall has in mind cases of slight change. He seems to confess that any large introduction of new laborers would break down his theory,—at least at the point of the food supply. If his contention be merely that slight disturbances do not count, that

a few scores or hundreds of new laborers added to a mass numbered by millions would make no appreciable difference, we may readily assent to the proposition; for it is applicable to any and every theory of wages. But our question is of tendency and of general principle. It is a poor rule that is good only for infinitesimals,—good only until a substantial case arises. Is it a part of Mr. Marshall's theory that every substantial case is to be ruled out as catastrophic?

Even in the mild case which Mr. Marshall contemplates, it ought to be obvious that, for the wages of the new-comers, his principle is simply that of drawing on the customary and necessary stock of commodities awaiting exchange. The carpet-dealers may sell down their stocks to meet the case, but the depleted reserves of exchange must be replenished later. Not only so, but they must even be made greater than before, to correspond with the increased production under the new conditions. Mr. Marshall's principle, then, does not, in the long run, save the laborers from loss of wages: it merely distributes the loss over a longer period. In other words, taking the residue theory on its own ground, it is clear that, if the reserves of trade be drawn upon to prevent wages from falling so low as they would otherwise fall, the necessity of filling up the reserves later must prevent wages from recovering their normal rate until some time after production has attained its normal flow under the new conditions.

Putting the matter as a concrete case, I should think it almost axiomatic that an unforeseen\* increase of ten per cent. in the labor of a country cannot add materially to the products available for paying wages until it has first added (roughly) ten per cent. to the productive apparatus of the country, to the materials of all grades and stages, and to the stocks of finished products awaiting exchange. Is it to be supposed that the classes who save will be ready to cover this whole amount by additional savings, without the inducement of higher profits than were previously attainable? Mr. Marshall, I am aware, makes no such assertion. He admits the

\*I say "unforeseen," because a regular or customary addition is likely to be discounted in advance at the expense (on the residue theory) of the former laborers.

decline of individual wages in cases of this kind. But it is clear that his general tone and treatment have the effect of giving large aid and comfort to those who deny the dependence of wages on savings. If, as he tells us, he regards the wages-fund theory, "not as false, but as pretentious and misleading," it is difficult to see why he adopts a method which is tenable only on the assumption that the essential principle of the wages-fund theory is false.

As to the subject of profits, it is unfortunate that I should have succeeded so poorly in my criticism of the new theory as to leave Mr. Marshall in doubt as to my meaning. His uncertainty leads him to restate his own position instead of meeting the objections to it. Perhaps he will be aided in perceiving the weakness of his position by observing that it involves two theses which consort very ill together. The first is that business managers, as a class, receive for their reward those certain quantities of wealth which are created by their own exertions and skill. The second is that, when skilful managers increase in number, the rewards of management, taking production as a whole, decrease. These I understand to be general propositions, applicable to all industry, since all industry needs management. Now, Mr. Marshall accounts for the decline of business earnings, when the number of capable business men increases, by attributing it to a decline in the value of the product created by each. This would be a perfectly valid way of accounting for a loss of earnings on the part of some managers; but it becomes absurd when used to account for a general decline, for so used it implies the possibility of a general fall of values. When certain managers incur loss of earnings by a decline in the value of their product, other managers must gain an increase of earnings. Mr. Marshall would readily see the absurdity of attributing a general fall of ordinary wages to a fall in the value of commodities. Why does he think it no absurdity to apply to the earnings of employers a doctrine that is so palpably absurd when applied to the earnings of their employees? Is the employer a less general factor in production than the laborer? Can the product created by one employer fall in value without a rise in the value of products created by other employers?

I hope these questions may make the point clear. My object is to suggest that the second of the two theses, embodying the new theory of manager's earnings, deprives the first of all validity as a general principle. The two taken together reduce themselves, in my humble judgment, to the mere truism that the skilful business man renders highly important services in production, and is ordinarily able to command a return proportioned to the effectiveness of his monopoly. But this is a doctrine as applicable to skilful lawyers and musicians, who take no part in production, as it is to employers of productive labor. For this and other reasons, I cannot regard the new theory, in its present form at least, as a very valuable contribution to economic science.

Passing now to President Walker's article in the last number of this journal, I wish to say at the outset that nothing could have been farther from my intention than to say anything personally grievous regarding Mr. Walker's writings on these subjects. What I said of his account of the wages-fund theory was not couched as a personal charge of misrepresentation. I am surprised and pained to see that it has been so construed by him. I simply said that, for my own part, I had never understood the wages-fund theory to assert or even to imply any such absurdities as he attributed to it. If this constitutes a personal grievance, I am profoundly sorry, because I see no way of withdrawing or even greatly modifying the statement. Surely, those who adhere to the general principle of the wages-fund must have the liberty of interpreting the doctrine in their own way, and of defending it against unreasonable construction, whether at the hands of unwise friends or hostile critics. Mr. Walker seems to hold that we are bound for all time by every statement, however inconsiderate, and every inference, however unwarranted, found in the writings of those who uphold the general theory. Not only so, but he seems to argue that we are bound to accept a hostile and, as it seems to me, highly strained construction of what the expounders of the theory have written. This would be to make an end of scientific progress. If it be demonstrable that the fundamental doctrine upheld by the older economists under the

name of the wages-fund is, after all, the true and essential principle in the law of wages, it cannot be wise to reject even a "patched and revamped" statement of the doctrine.

Space would fail me here to explain in full my grounds for thinking Mr. Walker's account of the wages-fund theory inadequate and unfair to the distinguished and clear-headed men of the past generation, who gave the theory a place in political economy.\* Those writers present the theory not as "a fragment, isolated, discontinuous with the rest of economics," though Professor Marshall ascribes this character to it. They conceived it rather, in my understanding of them, as an integral part of a whole scheme of related doctrines. In their treatment, it presupposes and is built upon their antecedent account of production and its three necessary agents,—land, labor, and capital. It includes, therefore, on the side of labor every circumstance that affects the supply of laborers. It presupposes on the side of capital all that has been said regarding its uses in production and the law of its increase. All the motives and circumstances that influence men favorably or unfavorably in the accumulation and use of savings are thus taken into account and made part of the case. Clearly, therefore, the theory takes full cognizance of the productiveness of industry,—less obtrusively, I admit, but no less effectively, than the rival theory does. It looks to present production, on the one hand, as supplying the source and, in a way, the limit of savings. It looks to future production, on the other hand, as furnishing the motive and opportunity for the profitable use of savings in hiring productive labor. Also, it posits human

\* If it were necessary to characterize Mr. Walker's account, I should speak of it rather as a failure to present the theory than as a case of misrepresentation. His war is waged less with the theory itself than with certain absurd consequences which he alleges to flow from it. His budget of quotations from wages-fund writers are all perfectly accurate; but they do not, they could not, convey a just view of the theory. The wages-fund doctrine is much too complicated to be expressed by picking out here a sentence and there a phrase from those who have written about it. It is in fact a peculiarly unsuitable matter for treatment in that way, especially when the clippings are taken from passages in which the writers, desiring to emphasize this or that phase or supposed consequence of the theory, state their point more forcibly or with less of qualification than the true proportions of the case demanded. It would be tolerably safe to set out with the assumption that the old economists were not fools, and that, even when their words may seem to bear a construction at variance with common sense, they probably did not intend them in that particular way.

intelligence striving by self-denial and good management to turn the situation to best account, but limited and held in check by the ever-present temptation to immediate spending and enjoyment.

Taken thus in organic connection with the principles which it presupposes and on which it is built; taken as, in my understanding of them, the older economists conceived it,—the wages-fund theory, instead of being a disjointed fragment, isolated, discontinuous with the rest of economics, becomes rather an inseparable part and necessary outgrowth of the elementary principles of the science. To take it as an independent, self-existing theory is, in my poor judgment, to fail in comprehending it. It is not surprising that those who take it so should argue as if the wages-fund at any time were supposed to be fixed by physical law and to be disbursed with as little regard to circumstances as is shown by the falling rain. Mr. Walker, for example, thinks it implies that wages are “altogether irrespective of the industrial quality, the skill, energy, temperance, frugality, of the laboring population”; that “the possessor of capital is under an economic necessity to employ labor”; that “only one of the three factors of production—namely, capital—has to do with the problem of wages”; that, “if the laborer does not seek his interest, his interest will seek him, and will find him”; and much else of equal absurdity.\*

These misconceptions—for such I think them to be—are perhaps accounted for by two facts or defects in the ordinary exposition of the wages-fund theory. In the first place, the exposition is usually too much restricted to the law of normal wages,—wages in a given industrial situation, which is regarded, for the purpose in hand, as constant. Too much is left for the reader, at least for the careless reader, to do in the way of adjusting the theory to changing conditions. It is

\* Another striking sentence might be added to Mr. Walker's supposed corollaries of the wages-fund theory, to the effect that the laborers are certain to receive the whole amount of the fund, whether they work or not; for has not Mill said “this amount, and no less, they cannot but obtain.” Has it never occurred to Mr. Walker that by the exercise of a little perverse ingenuity his own theory may be made to yield a few similar economic gems? For example, “The advocate of the residue theory virtually maintains that somebody is under an economic necessity to hire every laborer, and to pay him the equivalent of his product less rent and interest.” Such constructions may be amusing, but they are poor arguments.

clearly enough implied in the fundamental conception that any change in the industrial conditions produces a new case and a new determination of the wages fund; but, if the founders of political economy had foreseen how much trouble some of their readers would have in trying to apply a rule of normal wages to changing and therefore abnormal conditions, they would doubtless have seen the wisdom of paying more attention to market wages. Their work as it stands must be admitted to have an air of somewhat greater rigidity than belongs to the law of wages in actual life. Yet it is, on the whole, work based on a sound and just conception of the principles governing wages. It lays a good foundation for later builders, and as such deserves, in my opinion, our full and grateful recognition.

The other defect in most expositions of wages arises from not sufficiently distinguishing the savings, which constitute the wages-fund, from the working capital required by the very nature of civilized production. Wages are not a necessity of industry, but are due to special social conditions. It is no necessary condition of production that the whole burden of waiting for the natural rewards of labor should be borne by a few. Wages are an incident of the inequalities of wealth, or of waiting capacity, among men. Those who will not or cannot submit to the long waiting demanded by the laws of production and the difficulties of exchange, must accept what their more fortunate or more thrifty neighbors are willing to offer for their labor. Wages therefore depend directly on savings; and, strictly, the only use of savings is to pay wages. To give the name of capital to savings is virtually to regard the wage-receiver not as a man engaged in production, but as an animal to be used by those who are so engaged, and needing food and shelter at the hands of his employer, just as horses need fodder. Political economy ought not to view production from the employer's stand-point exclusively. We should gain much in clearness, it seems to me, by restricting the term "capital" to the necessary apparatus of production and exchange, to those things that would be necessary for carrying on production and exchange even if every laborer waited the full period for the natural reward of his labors. We should,

in that event, give up saying that wages depend on capital, or on circulating capital,—phrases that require too much help from the context and from the reader's reflection, in order to become intelligible. Since the only part of wealth influencing wages at any time is the portion of finished products (or of purchasing power) offered for labor, the simple and accurate expression would seem to be that wages depend on savings. There is, of course, a very intimate connection between savings and true capital. Savings are wealth seeking to become capital. They may be regarded as potential capital, since, where there are laborers willing to be hired, the man who has savings may easily obtain true capital in return for wages. But the readiness with which savings may be converted into true capital ought not to make us lose sight of the obvious and important distinction between the two. Failure to bring out the distinction clearly and observe it carefully has given rise to most of the objections raised against the wages-fund theory, as well as to most of the careless writing about it, which Mr. Marshall finds so misleading.

Mr. Walker resents the imputation of wavering in his statements regarding the advance of wages from savings. I must frankly confess that, even with the help of the explanations in his reply, I am unable to comprehend clearly his precise position on the question. He professes to see nothing ambiguous or illogical in the double proposition that wages are, in fact, paid in advance out of savings, yet are in economic theory paid out of the laborer's own product. In any but a loose figurative sense, the second of these statements seems to me to be a contradiction of the first; for, surely, the laborers are not paid twice, first out of savings and later out of product. Does the double statement perhaps mean that wages are advanced (to the laborers) out of savings, but are, in economic theory, paid (back to the employer) out of product? If so, it becomes at once clear and incontrovertible. But, thus understood, it is clearly nothing but the old doctrine, somewhat obscured by needless enigma of statement; so that one must hesitate in suggesting this as the true rendering. The claim of novelty or of discovery for so trite a principle would, however, be a suitable mate for several other claims advanced on behalf of the

new school; for example, the claim of exclusive property in the doctrine that men employ laborers, not to disburse a fund of which they may be in possession, but in order to make profit for themselves through the product.

As to the cases cited by Mr. Walker in which employers collect the proceeds of the labor before paying wages, two things are to be said. In the first place, the cases are, for the most part, not taken from ordinary productive industry. They are employees of railroad and express companies, servants in boarding-houses, actors, opera singers, ballet dancers, etc. In the second place, Mr. Walker does not, even in these instances, take the whole case into account. If he would consider how far wages are advanced in the railroad business, he must begin at the beginning; *i.e.*, with the building of the road-bed, the making and laying of the rails, and the construction of the rolling-stock and station buildings. If he would discuss the advance of wages in the hotel or the theatre business, he must similarly begin with the erection and equipment of the structures used for these purposes. And, in studying these cases, let me further point out that, when the producer of lumber pays his men with money received from the lumber-dealer, or the rolling-mill pays its hands with money received from the contractor, we have merely cases in which the advance of wages is shifted from one capitalist to another. We must look beyond these transfers of the burden to the final recouping of all the advances by the payments of those who, in the final result, consume the product. In the case of the railway and express business, for example, Mr. Walker overlooks the fact that, though freights may be collected before the employees are paid, the sums collected are still, for the most part, real advances from the savings of the business men for whom the goods are carried. To ignore this fact is to take a very superficial view of the case.

Mr. Walker meets my argument as to the impossibility of increasing wages by reason of improved efficiency of labor before the actual products are increased, by introducing the wonder-working power of credit between employers and laborers. It remains for him now to show that his suggestion is something more than a mere flight of fancy. In what part

of the civilized world is the hiring of laborers so conducted? Our questions relate to wage payments as they are, not as they might be. Secondly, when he has done this, he must tell us with what motive and under the stress of what compulsion the employers are supposed, even on the principle of long credit, to promise away the whole increase of product? These are points as to which Mr. Walker gives us no light, and yet they are obviously points on which light is greatly needed.

→ Mr. Walker's argument seems to assume that, when increase of product arises, the increment lies loose and unclaimed in the industrial arena, to be picked up by the laborers without challenge. He applies to it the geometric principle of "no reason why it should go to anybody else." He shuts his eyes to the fact that it does at first go to somebody else by the nature of the case. In what way is the employer's hold upon it to be relaxed? I showed in my former article that, beyond vague references to freedom of competition, Mr. Walker had cited no economic force or principle for accomplishing the result he contends for. But freedom of competition being merely a leveller,—not an independent force, but a condition of free play for the true economic forces,—I pointed out that it could have no tendency in and of itself to raise the general rate of wages in the manner alleged. It could only allow unimpeded action to any other influence or agency having the power or tendency, if unimpeded by combinations or custom, to bring about the specified result.

To this view of competition, Mr. Walker demurs somewhat scornfully. He says: "It is needless to spend time in pointing out the inadequacy of this view of competition. If the competition of employers among themselves for the profits of employment has nothing to do with fixing the general level of wages, why is that level, at any time, where we find it to be? Why is it not lower by one-quarter, one-third, or one-half?"

On Mr. Walker's own theory, this question must indeed be a poser. On the "exploded" theory of the wages fund, the answer to it is easy and clear. The general level of wages is what we find it to be, because the effective demand for labor, acting on the available supply, has brought it to that point. If the level were lowered by one-fourth, there would be more

savings offering for labor than the aggregate of wages, at the lower rate, would absorb. The presence of this unsatisfied demand for labor would speedily raise wages again.

The word "competition" has, unfortunately, two closely connected, yet different, meanings. I suspect that, when Mr. Walker speaks of "the competition of employers among themselves for the profits of employment," he uses the word in its popular sense,—the sense in which men speak of "fierce competition" for a thing, meaning strong demand for it; or avow that there is "greater competition" or "more competition" at certain times or places than at others, meaning that there is a more active rivalry or a greater number of persons competing. I supposed that, in political economy, it was universally agreed to use the word in a scientific sense, to denote the absence of control by custom or by combinations or by anything other than the free play of individual self-interest. In a state of competition, all the persons concerned are supposed to do the best they can for themselves, acting independently. In a word, competition is merely short for "free competition," or "freedom of competition." In this sense, competition may be as full and free when demand is small as when it is large, when wages are falling as when wages are rising. All that free competition does in any case is to let the whole demand play on the whole supply. In the "labor market," I understand freedom of competition to mean that every laborer declines to work for any employer who offers less than another is ready to pay him; also, that every employer declines to pay any laborer higher wages than he can get other equally good laborers for. If this be the accepted meaning, it follows that, for the causes determining *how much* each laborer can get and how much each employer must pay, we have to look beyond freedom of competition. It also follows that Mr. Walker, in his hypothetical case of a ten per cent. increase in the efficiency of labor, has failed to indicate any economic cause or force that should carry the whole increase of product at once to wages.\* Evidently, then, the whole question between us

\* Any one who takes the trouble to insert the complete phrase, "freedom of competition," in Mr. Walker's question, quoted above, must be struck by the character of it, when thus stripped of the ambiguity which alone gives it the air of an argument.

turns on the efficacy of free competition to raise wages. I am willing to let the case rest so, leaving the intelligent reader to decide the question for himself.

I have followed Mr. Walker's example in speaking of first, for the good reason that, if the old theory of wages is the true one, the new theory of profits has small claim to attention. I see little in Mr. Walker's reply that seems to correct my remark, so slightly does it meet the real difficulties of the case. Mr. Walker unfortunately misses the point of what I was saying regarding the two descending scales of productiveness differences in natural agents and in the ability of man. I did not for a moment deny the existence of the two scales, nor did I deplore the inconvenience to economists that arise from recognizing both. My point was the extreme absurdity of assuming (for it was and is only an assumption) that the differences due to varying business ability, being  $\alpha$  to all production, can have any effect on the values of commodities.\* As Mr. Walker has so nearly nothing to say on this vital point, it is very unfortunate that any inapt statement on my part should have led him to waste several pages in refuting propositions which at least have not been designedly advanced. All he has to say that bears on the main question is in substance this: Changes in the production of all commodities (including gold) are affected by changes in the general level of prices, because the supply of gold is but slowly affected by changes of production. Now, the introduction of employers of less than full efficiency diminishes production, therefore it raises prices.

All this is undoubtedly true and in its place important as a defence of Mr. Walker's original proposition, it is more curious than convincing. His original proposition is that the presence of the no-profits employer in every industry

\* The question as to rent is simply one form of this general question, whether the no-profits employer has any special control over value. The question was how we could be sure in the case of agriculture, mining, etc., that efficient employers have control of the least productive lands, mines, etc. Mr. Walker answers by showing that, *if it be granted they have*, the effect is the same as if the natural agent itself were just so much poorer. He must reflect, that this answer, to say nothing of its other defects, does not answer the main question in the case.

normal price for every product on the same principle and in the same sense as the poorest lands in cultivation set the normal price of wheat. More efficient employers, using this price, are able to gain profits of their own creation, just as the better lands, using the price set by the poorer, afford a rent of their own creation to their owners. This is obviously stated as a general law good for all times. It is only as such that it merits any notice.

Now look at the defence. Here the general law suddenly shrinks into a mere friction-allowance for a time of transition. It was propounded as a law of profits, but here it turns into a subordinate principle in the market value of money. It is strange it should not have occurred to Mr. Walker that the rise of prices for which he now contends, being general, has no necessary connection with profits at all. Prices in that sense might be a thousand times higher than they are, without profits being affected in the least. The only changes of prices that can in themselves affect the profits of employers are changes of relative prices,—changes that imply changes of value, as when, in his own favorite analogy, the price of wheat rises because poorer land has to be cultivated.\* Mr. Walker loses sight of this important principle, and then says that I have “fallen into a familiar error in the theory of money,” because I did not do the same. Our question has nothing to do with the theory of money. Even if it had, we have yet to be told how the no-profits employer is enabled to keep even the general level of prices permanently high. If Mr. Walker is willing to admit openly that which his defence clearly implies,—namely, that the price-regulating function of the no-profits employers depends for fulfilment on what must be regarded as an imperfection of the medium of exchange,

\*The profits of gold-mining must of course be excepted. Perhaps, in order to avoid misunderstanding, I ought to add that, when all prices rise or fall, profits are affected unless or until money wages rise or fall correspondingly. Thus much I should concede freely. But as the change of profits in this case, as well as the subsequent correction, arises from changes of real wages, and as it is apparently no part of Mr. Walker's theory that profits depend on wages, he is probably not disposed to urge this point,—in fact, to do so would be to desert his own ground. Besides, his need is of a support for a general law good at all times; and this, as remarked above, can hardly be found in the incidents peculiar to a transition stage.

that its action is limited to periods of change in the proportions of good and bad management, and lasts only until the effect of the change has time to extend to the gold supply,—I think that would be a satisfactory end of our controversy. That would place the no-profits employer on the same level as extensions and contractions in the use of credit, new discoveries of gold, and half a dozen other price-regulating agencies which Mr. Walker has not thought fit to mention. Finally, I take the liberty of suggesting that, if Mr. Walker would accept one lesson from the old economists, and would drop the word "price" altogether in discussing questions that have to do with value, we should make more rapid progress.

There are many other inviting subjects in Mr. Walker's reply; but I forbear to speak of them, lest he repeat the complaint that my objections take too wide a range. The one to which I have here confined myself is unfortunately one of those which, according to Mr. Walker, "should not have been made at all." But I must take the liberty of reminding him that he expressly invited criticism,—“the more active and earnest, the better,”—and that the active and earnest critic can hardly be expected to confine himself to such objections as the author of the work criticised would have selected.

S. M. MACVANE.

## THE RATE OF INTEREST.

In the course of his incisive reply to Professor Macvane's remarkable rehabilitation of the wages-fund theory, Mr. Walker incidentally makes some noteworthy admissions as to the nature of the "interest" which forms a part of business profit.

1. It appears that Mr. Walker's "interest" is not any of the kinds of interest known to the practical man or to the classic economist. It is (p. 286, note) neither "the current rate paid on loans in the money market" nor "the current rate paid on more permanent loans on security," nor even "the normal rate to which the variations in current rates of loan interest tend to conform." But it is clearly the last named, which, as Mr. Walker said in his April article, "all economists, from Adam Smith down," have had in view as a constituent of profits, and to which Professor Marshall refers as the "rate of interest." It is this interest which is supposed to tend to equality and to decline. And I entirely agree with what I understand his meaning now to be,—that this old "normal rate of loan interest" does not, with rent, wages, and the "rent of ability," complete the distribution of the product. I attempted, in the January number of this journal, to show that the interest which entered into profits was something more than this; and I gather that Mr. Walker so far agrees with me. It would be interesting (if Mr. Walker does not accept the "law of economic interest" therein stated) to know more particularly what relation he conceives this interest to bear to "normal loan interest" and how its amount is determined.

2. Mr. Walker may reply that he has dealt with this point in stating (pp. 285–287) that the rate of interest is determined by the "final utility" of capital; that is to say, by the return to be obtained by the use of the last increment of capital employed. But this is obviously the law expressing the interest to be obtained on loans upon security; and that Mr. Walker had this "loan interest" in view is evident from his summing up the argument (pp. 286, 287) by saying that, "notwithstand-

ing that the utility of the successive increments of capital applied to production has varied within a wide range, all the loans made would, in a money market where perfect competition existed, be made at the same rate,—the rate, namely, which the last borrower can afford to pay.” This still leaves us without any determination of the amount of the interest which enters into profit (“economic interest”), which, in the note on the same page, Mr. Walker admits to be something different from “loan interest,” whether market or normal.

Who gets the advantage of the higher utility of the increments of capital applied at greater advantage than that of the last increment? It will hardly be asserted that this is (even in perfectly free competition) immediately and wholly ceded to the consumer, as values will continue to depend on the cost of production of the portion of the supply produced under the most disadvantageous circumstances (i.e., with the final increment of capital). What is the cause of the high market value of the “good will” of a business?

8. But, notwithstanding his virtual admission that the successive increments of capital are applied with diminishing advantage, Mr. Walker refuses to admit that the “return to capital” varies. “All portions of capital do, in proper economic theory, bear an equal rate of interest” (p. 287). Is he not still thinking only of loan interest? If there is a difference in the amount of product turned out by two undertakings, and this difference is caused neither by difference in the land used nor in the amount of labor employed, nor in the ability or skill of the labor or of the management, it may fairly be ascribed to the varying advantages of the capitals employed, as it passes with their ownership, and is included in their price. It is true that in such a case the market value of the two undertakings (that is, the nominal valuation of their capitals) will be strictly in proportion to the net incomes yielded by them. But this fact (which is equally true of lands of different fertilities) does not, of course, mean that the returns to the capitals invested bear an equal proportion to those capitals. Industrial capital does not consist of valuations, in currency, of opportunities of profit. Cotton is not spun by share quotations, but by actual machines of wood and

iron, which function with more or less efficiency, quite irrespective of the price of cotton-mill shares.

4. The fact is that Mr. Walker exaggerates the possible mobility of capital. He fully recognizes that, even in perfect omniscient competition, the industrial capabilities of lands and abilities will continue to vary. Equally, the industrial advantages of railways, ships, houses, harbors, docks, water-works, gas-works, tramways, quarries, mines, canals, markets, fishings, and countless other durable forms of so-called fixed capital, must necessarily vary. It will hardly be denied that the return from these instruments will be according to the law of rent, and these (with land) make up three-fourths in value of the whole realized wealth of the United Kingdom. But, in every department of industry, the means of production, contemporaneously employed, vary in efficiency. The Cornish mines still use beam-engines dating from Newcomen. Sailing ships still plough the ocean alongside of quadruple expansion engines. The flail is worked in Germany as well as the threshing machine. Boots are still made by hand in competition with steam boot factories. The van of industrial progress must always be in advance of the stragglers (irrespective of patents or monopolies), if only while the old appliances are wearing out. And, since it is the article produced under the most disadvantageous circumstances which determines the value of the whole, there must necessarily be a real "rent" upon all but the capital employed under those worst circumstances. This (with the constantly existing cases of rent of opportunity) is obviously the source of the large industrial profits. Any successful manufacturer would scoff at the notion of his profits having been merely five per cent. plus his salary as manager.

5. What is mobile is "loan capital." As Bagehot vividly described, this flows unceasingly where it can be most productive; and its law is undoubtedly "equality of returns." Its influence, moreover, is a perpetually levelling one, its re-enforcement of the capital of superior efficiency constantly eliminating the industrial capital embodied in obsolescent forms of inferior efficiency. But the process is never ending; and there can be conceived no moment in which every application of

labor, throughout all trades all over the industrial community will be aided to exactly the same degree by capital of precisely equal efficiency. The hypothetical equilibrium is dynamic and not static, a "becoming" and not a "being." There is no real rent of capital; and it is this (economic interest) which enters (with rent of ability) into business profits, and is merely "loan interest" (as, indeed, Mr. Walker recognizes).

6. Whether anything is gained by describing the aggregate of this varying economic interest as a rate per cent. on the aggregate nominal value of the capitals employed is open to question, since the exchange value of each portion of capital itself depends on the amount of income to be derived from its use, in comparison with current loan interest and the social estimation, and other attributes of the undertaking. We do not, in economics, speak of land rent as a percentage of the value of land; and the market value of the industrial capital in any commercial undertaking is determined on principles precisely similar to those governing the price of real estate, and equally without the slightest reference to original cost to the proprietor.

It is therefore submitted that the scope of the Ricardian law of rent must (as Whately long ago suggested) be extended even further than Mr. Walker would carry it,—extended indeed, from agricultural land to all the instruments of production, as well as to the varying efficiencies of every kind of human labor. In this sense, the whole product is divided between rent and wages; between what can be produced by the average workman at the margin of cultivation, with his skill or capital, and what is actually produced in each undertaking throughout the industrial community by the aid of his instruments, and skill of varying superior efficiency. The loan interest received by a mere investing capitalist is but a part of the excess product caused by the use of that capital; the balance of "economic interest" being retained by the capitalist *entrepreneur*.

SIDNEY WILKINSON

CITY OF LONDON COLLEGE.

## TARIFF ACTS UNDER THE CONFEDERATION.

The activity of the States in tariff legislation from the close of the Revolution to the adoption of the Constitution is greater than has generally been supposed. Pennsylvania passed as many as fifteen acts, including supplements and amendments, from 1780 to 1788; Massachusetts seven, New York seven, Virginia twelve, Maryland seven, and Connecticut six for 1784–85. New Hampshire, Rhode Island, and New Jersey all had legislation of the same kind. Whether Georgia, the Carolinas, and Delaware passed other acts than those vesting the right in Congress to collect a five per cent. impost, I cannot say with certainty. The field of investigation is a considerable one; and accordingly, in dealing with it, I purpose first to examine the main provisions of the most important acts, and then to ascertain how far the States were influenced in the passage of these acts by ideas of protection.

In July, 1783,\* Massachusetts laid an import duty for the expressed purpose of raising a revenue. The duties were all *ad valorem* and of two grades:—

Nails, looking-glasses, glass, and earthen ware paid . . . .	5 per cent.
All other imports, except hemp and salt, paid . . . .	2½ per cent.

Goods coming in from other States were subject to the duty, if of foreign growth or manufacture. If brought in by land, the duty was to be paid to the collector of the county where the goods were delivered; but the conductor of the imports must, on entering the State, make oath before a magistrate that the duty would be paid according to law, and confiscation was the penalty for evading the duty. Imports by sea could not be landed without a permit from the naval officer.

An act of June, 1785,† for the regulation of navigation begins: “Whereas it becomes expedient and necessary for this commonwealth to make some commercial regulations for the encouragement of their own trade.” . . . This was distinctly a retaliatory measure. Exportation in British vessels was prohibited on pain of confiscation of the vessel; and tonnage

\* *Laws of Massachusetts*, vol. i. p. 16.    † *Ibid.*, vol. i. p. 280.

duty was imposed on foreign vessels, and the duty on goods imported in such vessels was doubled.

By an act of July, 1785,\* Massachusetts took a further step of importance. The preamble reads, "It is highly necessary for the welfare and happiness of all States to encourage agriculture, the improvement of raw materials, manufactures, and a spirit of industry." Specific and ad valorem duties were laid, the latter being divided into six classes:—

2½	per cent.	on woollen and linen cloths and stockings.
5	"	" wrought pewter.
7½	"	" beef, pork, butter, and cheese.
10	"	" sole leather, tanned calf-skins, psalm-books, account books, and nails.
12½	"	" boots, shoes, plated ware, soap, candles, vehicles of all kinds, horse gear, and carpets.
22½	"	" beer, ale, porter, ready-made clothing, wooden furniture, and cabinet-makers' work.

Some of the articles paying specific duties are anchors, axes, scythes, shovels, hoes, cast-iron ware, and British cordage, which was charged double the duty on other foreign cordage. Molasses was exempt. All these duties were in addition to the existing duties, so that the duty on some articles was high.

In November, 1785,† an act was passed "for encouraging the manufacture of loaf-sugar in this commonwealth." The method adopted was a rather startling one, consisting simply of the absolute prohibition of the importation of loaf-sugar under penalty of forfeiture.

One year later, November, 1786,‡ all the existing duties were abolished; and a new system was adopted. The duties were all ad valorem, as follows:—

15	per cent.	on plated ware, silver cutlery, earthen and stone ware, silks, cotton goods, beef, pork, soap, and nails.
10	"	" iron and everything made of iron, cordage, cables, and cutlery.
5	"	" everything not mentioned.

There was to be a duty of 1 per cent. on hemp, to be devoted to encouraging the raising of hemp in Massachusetts.

\* *Laws of Massachusetts*, vol. i. p. 300.

† *Ibid.*, vol. i. p. 429.    ‡ *Ibid.*, vol. i. p. 626.

The prohibition of certain articles, to encourage their production at home, seems to have grown in favor; for a clause of this act reads:—

And whereas it is the duty of every people blessed with a fruitful soil, and a redundancy of raw materials, to give all due encouragement to the agriculture and manufactures of their own country,—therefore *be it enacted* that the following articles, not the growth or manufacture of any of the United States, be declared to be contraband, and are prohibited from being brought into this State on pain of forfeiture.

The articles prohibited were loaf-sugar, hats of fur, hair, or wool, boots and shoes, vehicles, harnesses, scythes, iron shovels, hoes, articles of dress, porter, beer, ale, butter, cheese, linseed oil, candles, wearing apparel, and wooden furniture. The free list was wool, molasses, dyestuffs, lead, and salt, if imported in American vessels. This act ends the tariff legislation of Massachusetts.

Pennsylvania began legislating on this subject as early as 1780, and by 1788 had passed at least fifteen acts. Of these, her act of Sept. 20, 1785,\* proposes “to encourage and protect the manufactures of this State by laying additional duties on the importation of certain manufactures which interfere with them.” The preamble states in substance that,—

Whereas the fabrics and manufactures of Europe may be imported into this country in time of peace at cheaper rates than they can be made here, yet good policy and regard for the well-being of divers useful citizens employed in the making of goods in this State demand that moderate duties be laid on imports which do mostly interfere with them, and which (if no relief be given) will undermine and destroy useful manufactures of the like kind in this country.

The duties were both specific and ad valorem, without apparent system. Only imports of foreign growth or manufacture paid the duty. Some of the articles taxed were: coaches, 20*l.* each; two-wheel carriages, 10*l.* each; clocks, beer, ale, porter, soap, and candles; shoes, 2*s.* per pair; cotton and wool cards, manufactured leather, paper, 10 per cent. ad valorem; cast iron and steel, wrought copper, brass, slit iron, nail rods,

\* *Pennsylvania Gazette*, October 5, 1785; *Pennsylvania Packet*, September 22, 1785; *Pennsylvania Law Book*, No. 2, p. 44.

sheet iron, 10 per cent.; hats, cordage, fixed rigging, glass, rum, wine; shipping (save of those countries by treaties with the United States), 7s. 6d. per ton; sail per cent.; and an additional duty of 5 per cent. *ad valorem* was laid on the importation of all foreign manufactures of refined steel or iron. The last act passed by Pennsylvania was in March, 1788,\* "to encourage and protect the manufactures of that State."

New York in March, 1784,† levied duties on the importation of goods of foreign growth or manufacture. The articles paying specific duties was: rum, 4d. per gallon; sugar, 4s. per cwt.; hollow iron, 4s. per cwt.; scythes, axes, dles, boots and shoes, dressed leather, tea, coffee, and water and articles not named (except cocoa, raw hides, molasses, coal, bricks, manufactured tin in blocks) were to pay *ad valorem* duty of 2½ per cent. Masters of vessels must under oath a manifest of their cargo to the collector of New York within a specified time. Bonds might be given for three months as payment of the duties.

By an act of November, 1784,‡ these duties were revised and cordage imported from any of the United States was to pay the duty. In March, 1785,§ it was proposed "to encourage the importation of goods into this State in vessels therein and owned by citizens thereof." According to this double duty was imposed on goods imported in British vessels. On April 12, 1785,|| a bounty of 8s. per cwt. was granted on hemp raised within the State; and, "in order to encourage the raising of hemp and the manufacture of cordage and linseed oil," an additional duty of 4s. per cwt. was laid on cordage, of 2s. per cwt. on hemp, and of 4d. per gallon on oil, which duty was to go to the payment of the bounty on hemp.

The last act of New York was 11 April, 1787.¶ There were specific duties, three classes of *ad valorem* duties, and a free list. Articles paying specific duties were: steel,

\* *Pennsylvania Law Book*, No. 3, p. 368.

† *Laws of New York*, session 7, chap. x.      ‡ *Ibid.*, session 8, chap. vii.

§ *Ibid.*, chap. xxxiv.      || *Ibid.*, chap. lxviii.      ¶ *Ibid.*, session 10, chap. lxx

per pound; bar iron, 4s. per cwt.; iron hollow ware, 6s. per cwt.; nail rods, 4s.; cordage, 4s.; spikes, nails, molasses, tea, coffee, salt, dressed and tanned leather, boots, shoes, etc. Ad valorem duties were:—

- 7½ per cent. on harnesses, olives, pictures, pewter, tin, blank books, hats, writing paper, and china ware.
- 5 “ “ “ beef, pork, cheese, butter, soap, candles, and anchors.
- 2½ “ “ “ all non-enumerated articles.

Free list, raw hides, whale oil, mahogany, wool, cotton wool, dyewoods, beaver furs, and deer-skins.

In June, 1785,\* we find Rhode Island laying duties “to encourage the manufactory within the State and the United States.” Ad valorem duties were:—

- 25 per cent. on ready-made garments, canes, toys, etc.
- 20 “ “ “ paper, tinware, boots, shoes, saddles, bridles, wool and cotton cords, whips, and gloves.
- 10 “ “ “ tools, muffs, tippetts, ermine, cordage, lines, candles, soap, tobacco, jeweller’s ware, beer, and porter.

Specific duties on axes, scythes, knives, loaf-sugar, hats, iron hollow ware, dressed and tanned leather, cheese, wrought silver and gold, clocks, watches, and wines.

New Hampshire in March, 1786,† passed an act declaring that “the laying of duties on articles of the produce and manufactures of foreign countries will not only produce a considerable revenue to the State, but will tend to encourage the manufacturing many of those articles in the same.” Accordingly, ad valorem duties were laid of four classes:—

- 15 per cent. on jewels, wrought gold, brocades, wrought iron, nails, sugar, linseed oil.
- 10 “ “ “ china and earthen ware.
- 5 “ “ “ wines, beer, porter, pitch, tar, turpentine.
- 2½ “ “ “ all unenumerated articles.

In June, 1786,‡ an act to encourage the manufacture of linseed oil was passed, because “the manufacturing of oil from flaxseed will furnish employment for poor persons, have

\* *Pennsylvania Gazette*, August 24, 1785.

† *New Hampshire Laws*, 1776-89, p. 152.   ‡ *Ibid.*, 1786, p. 196.

a happy influence on the balance of trade, and greatly tribute to the wealth of the good subjects of this State 1787,\* an act "to encourage the erection of mills for sl rolling, and plating iron, and to promote the manufactu nails" was passed.

The object of the first impost of Virginia was to supply of money for the United States. This was in A uniform duty of  $2\frac{1}{2}$  per cent. was laid on goods "bou any resident to sell again, the duty to be paid by th chaser." If imported for private consumption, no duty be paid. Goods coming from other States were subject duty. If coming by land, the importer must apply to the of the county, furnish an account of the imports, and p duty. Detectors of smuggling received compensation,— case of rum, 5s. per gallon. The penalty for evading th was confiscation of the goods. Other acts were pas 1780,† 1781,§ 1782,|| 1783,¶ 1784,\*\* 1786,†† and 1787.‡‡ acts differ from those of the Northern States in that th no mention of encouragement to manufactures, revenue the object. The same general classes of articles were tax in the examples given above, both specific and ad va duties being used.

Maryland also made no mention of protection or of pr ing manufactures, her object being revenue. The rate of was low, and the specific duties few; but it is not neca to go into the details of these acts, as they contain no feature.

The same may be said of Connecticut. Though severa were passed, no real difference is to be found in them.§§

Some prominent writers, both in history and in econo have asserted that the United States prior to 1789

\* *New Hampshire Laws*, 1786, p. 200.

† Henning's *Statutes at Large*, vol. x. p. 283.

‡ *Ibid.* § *Ibid.*, vol. x. p. 409. || *Ibid.*, vol. xi. p. 122.

¶ *Ibid.*, vol. xi. p. 196. \*\* *Ibid.*, vol. xi. p. 450.

†† *Ibid.*, vol. xii. p. 289. ‡‡ *Ibid.*, vol. xii. p. 304.

§§ Acts of Maryland were in 1782, 1783, 1784, 1785; of Connecticut, 1784 and See *Laws of Maryland*, chaps. xlviii., xxvi., lxxxiii., lxxvi., lxiv. ; *Laws of necticut*, 1780-89, pp. 270, 312, 322, and 346.

strongly imbued with the principles of free trade; that, far from having any wish to apply protection, they had little idea of that term, as at present understood. Bancroft says that "in America as yet there existed no system of restrictions. . . . The States had so steadily resisted the British Navigation Acts that the desire of absolute freedom of commerce had become a part of their nature"; and he calls the Americans a "young people which solicited free trade." H. C. Adams, too, argues that protection was ultimately forced on the country against its real wishes by the narrow policy of England. Facts will not sustain this view, at least so far as the Northern States are concerned. Massachusetts, Pennsylvania, New York, New Hampshire, and Rhode Island all passed acts the purpose of which was protection just as truly as that of any acts passed since, though of course they were not so effective. These acts expressly stated that they were to encourage and protect manufactures and agriculture. The only difference between them and the acts of later date is that the duties were not so high,—the result of inexperience. The act of July, 1785, by Massachusetts, raised the duties on beer, ale, porter, furniture, ready-made clothing, to 25 per cent. ad valorem; nails to 15 per cent.; leather, 12½ per cent.; and the specific duties correspondingly. This act is not much outdone by the act of 1816.

But it was not in the legislatures alone that protection was understood. It was a subject freely discussed in the newspapers of the day. In a letter signed "Friend to Commerce," in the *Independent Chronicle* (Boston) of August 12, 1784, "the necessity of promoting our manufactures, of encouraging our agriculture, and of bringing forward our internal resources," is examined. The writer held that woollens, linens, cloths, and hosiery might, by proper encouragement, be made among ourselves. He would encourage them "either by bounties or by putting it out of the power of the importer, by duties on their importation, to disturb or injure the manufacture." During the war, he said Massachusetts had manufactured all clothing used in the State, and that a start had been given; but now the supply of imported articles discouraged these young manufactures, which, "had no such importations taken place

and the demand for our manufactures become general, soon have furnished us equally on as good terms as importations." The duty on goods that might be made "ought to be so high as effectually to destroy their importations." The next assembly "ought to devote themselves to the promotion of our manufactures by laying heavy duties on such articles as can be and are manufactured among us." This is a pretty good statement of the young industrial movement.

In the same paper, March 31, 1785, a letter is addressed to the voters of the State, exhorting them to vote only for those who were in favor of laying duties to protect and build up our manufactures. Again, April 14, 1785, a letter advising a "prohibition of the importation of articles easily manufactured among us," and that "every branch of manufacturing trade should meet the encouragement necessary for its support." At a meeting of the tradesmen and manufacturers in Boston, April, 1785, it was resolved "that a petition be presented to the next legislature, praying that such duties may be laid on foreign importations of all articles usually made here as to prevent their being brought among us to the injury of our individuals as are now in those manufactures."\* If, now, we compare the dates of this agitation with the dates of the principal acts of Massachusetts, we see at once that the agitation was the result of protectionist agitation by the people.

In Pennsylvania, also, there was a popular movement towards protection. The papers contain discussions of it, and there were numerous petitions to the legislature. In 1785 a committee of merchants of Philadelphia petitioned for protection. The committee of the House, to whom the memorial was referred, reported:—

That three hundred tons of nails have been imported into this State within a year, worth 19,000*l.*; and that with proper encouragement the whole quantity necessary for the consumption of the State may be made here; that with bar iron it appears a sufficient quantity may be made in this State for its use and for exportation, but that by the large importations lately made the price is so much reduced as to disable the owners of forges to go on with their business. Your committee, however,

\* *Independent Chronicle*, May 12, 1785.

ing bar iron as necessary to the agriculture and manufactures of the State, are doubtful of the propriety of imposing a tax on its importation now.\*

Accordingly, the tax on nails was raised, while no tax was imposed on the bar iron. In this decision, the committee showed a keener knowledge of how protection should be applied than has been shown by the framers of some of our more modern acts. They saw a tax on bar iron would be prejudicial to manufacturers generally, and would, by nullifying the effects of duties on manufactures, thwart the object of protection. In 1824 and 1828, we have seen a tax laid for the purpose of protecting woollen manufactures rendered useless by another tax on wool. And during and since the war of 1861 we have seen to what evils and needless complications the compensating process has led.

From all this, it is clear enough that the States sought protection for the sake of building up manufactures. It was natural that they should. To suppose that they had any special predilection for free trade, at a time when restriction was the policy of the world, and while the mercantile system had not yet lost its grip save among a few economists, is to suppose them far ahead of the times.

Nor would their policy have been different if England had practised perfect reciprocity with them at the beginning. What led to the imposition of protective duties was the great flood of imports from Europe after 1783. The people, not understanding the working of international trade, supposed they would lose all their specie and become bankrupt.† They saw, too, the effect on their struggling manufactures; and their patriotism was aroused. They were determined to keep what money was already in the country. Now, these conditions would not have been changed if England had had free trade. She had an industrial advantage; and, in any case, these vast importations would have come in, so that the real grievance would have been present. No doubt, the fact that England placed restrictions on American vessels aggravated the trouble; but it was by no means a primary cause.

M. E. KELLEY.

\* *Pennsylvania Gazette*, February 1 and 15, 1786.

† In an act of Massachusetts, a reduction of 10 per cent. of the duty was allowed when the specie for the payment of the duty was imported with the goods. *Laws of Massachusetts*, vol. 1. p. 526.

## NOTES ON EARLY BANKING SCHEMES.

The establishment of the Bank of England in 1694, and abortive Land Bank of 1696, were the results of a discussion which had left its traces in projects and pamphlets scattered over a century. The following notes of a series of banking schemes will show how the English mind was long attracted on the one hand by the successful operation of deposit banking in Venice and Amsterdam, and on the other by the idea of devising some means for using landed security as the basis of banking credit.

In Price's *Handbook of London Bankers* (p. 142) is given in full the petition of Christopher Hagenbuck and his partners in November, 1581,\* representing that he has found a way to institute an office into which much money shall enter every year without expense, so that her Majesty can have ready of any needful sum, the country be kept in abundance, and usury stopped. The petitioner proposes to explain his plan on condition that he shall have for twenty years six per cent. on the gross sum received by the office. The queen agreed to allow four per cent. by a grant under the Great Seal, but nothing further appears to have been done.

Hagenbuck's petition is in Italian, and he is himself described as "an Italian" (p. 147). The petition is dated just twenty years prior to the decree of the Venetian Senate establishing the "Banco della Piazza de Rialto," at a time when banking had shown its advantages and its dangers, and the debate as to the substitution of a public bank had just begun in Venice. It is not unlikely, then, that Hagenbuck proposed to import into England an idea which had been familiar to him from Venetian experience.

Price also gives (*Handbook*, p. 145), a series of papers of date of May, 1622,† in which it is proposed that a bank be established, under the charge of a commission of merchants, where the king should receive and make his payments.

\* This is entered by title in *Calendar of State Papers, Domestic*, 1581-

† These papers, numbered 29, 30, 31, and 32 are described in *Calendar of State Papers, Domestic*, 1619-1623, p. 386, where Nos. 29, 30, and 32 are said to be by Robert Heath, then Solicitor-General.

merchants be invited to leave their money, and where "all payments of 20*l.* and above shall be made, and only an entry made ther of the payment."

They which receave ther mony at the Bank shal be at ther owne libertye, eath<sup>r</sup> to carry it away, or to leave it ther for ther owne use at ther need : If they leave it ther they shall by way of assignation pay it over, only by entring it in the Bank, which shall goe as an actuall payment, & soe a 100*l.* may be assigned fro ma to man to serve for payment of tenn severall 100<sup>dred</sup> or more. . . .

The examples of oth<sup>r</sup> states might teach us the use of this Bank, especially of the Venetians & other places in Italye.

Other references are made in these papers to the example of Venice. No action appears to have been taken on the scheme of 1622.

Under the Commonwealth, W. Potter published :—

*The Key to Wealth* ; folio, 84 pp.

*The Tradesman's Jewell* ; small 4to, 16 pp.

*Essay upon a Bank of Lands* to be erected throughout the commonwealth ; small 4to, 6 pp.

*Humble Proposals* ; small 4to, 16 pp. 1651.\*

The *Key to Wealth* is a prolix discussion, of which the effect is seen in the proposition (p. 14) "that an encrease of money cannot possibly occasion an encrease in the price of commodities (or any other Inconveniencies) but by increasing the sale of Commodities." Anything else, the author argues (p. 38), which would give as good security for obtaining commodities at pleasure, would be as good as money ; and so (p. 45) bills might be issued by a company of tradesmen by consent, who should bind themselves each to the other to receive and make the bills good. The *Tradesman's Jewell* suggests that the bills should be paid within six months after demand, and points out that estates would rise from quick trading with bills, and become greater security,—

Whereby to borrow more Bills to the doubling of such increase, and so *ad infinitum*.

\* My note of the full titles of Potter's pamphlets is mislaid. For the *Tradesman's Jewell*, see McCulloch's *Literature of Political Economy*, 159. The *Key to Wealth* and *Tradesman's Jewell* are both referred to in the *Humble Proposals*, and are therefore as early as 1651.

Now this perpetual doubling the Increase of their stock is of so great concernment, as though men's Trading should be but ordinary; yet it will make an Estate of 1000*l.* to amount in 40 years to 500 millions . . . and, by consequence, it would make the people of this Nation to be worth in 40 years (the World affording but Commodity enough for Money) five hundred thousand times more than now they are; that is, he who is now worth but twenty shillings to be worth five hundred thousand pounds, and so of others proportionally.

In his *Humble Proposals*, the author makes the pregnant suggestion that obstructions in law to transferring bills be removed, "to which purpose there is a Petition it seems already presented"; and, in the *Essay*, he makes a distinct proposition for a land bank, of which this is a summary: —

1. That 100 places be appointed for payments to be made, etc.
2. That all payments above 10*l.* or 20*l.* be required to be made in Bank credit.
3. That there be no way to raise this credit in Bank but by the mortgaging of land at 6 per cent.

Besides giving landed men credit at two per cent. (?) and a large revenue to the public, this would avoid "all danger of surprise (as lately in *Holland*), there being (by the law of the Bank) no money to rest there."

Of very different character is the following: —

*Seasonable Observations* Humbly offered to his Highness the Lord Protector. By *Samuel Lambe*, of *London*, Merchant. Printed at the Author's charge for the Use and Benefit of the English Nation, and to be considered of and put in execution as the High Court of Parliament, in their great Wisdoms shall think meet. Jan. 27, 1659.\*

Having in mind the rivalry of the Dutch, Lambe finds a bank the best means of coping with them: —

A bank is a certain Number of sufficient Men of Estates and Credit joined together in a joint Stock, being, as it were, the general Cash-keepers or Treasurers of that Place where they are settled, letting out imaginary Money at Interest at 2 and  $\frac{1}{2}$  or 3*l.* per Cent. to Tradesmen, or others, that agree with them for the same, and making Payment thereof by Assignment, and passing each Man's Account from one to another with much Facility and Ease, and saving much Trouble in receiving and paying of Money, besides many Suits in Law and other Losses and Inconveniences which do much hinder Trade.

\* Reprinted in the *Somere Tracts*, ii. 164, or in Scott's edition, ii. 446.

He proposes that the management of the bank should be given to merchants chosen by the great trading companies of London, like the East India, the Turkey, and the Muscovy Companies.

That all be at Liberty to bring in any Money into Bank or not, and if any that have Money there, desire to have it again in Kind, should have it at Demand. . . .

That they let out imaginary Money or Credit, upon Ticket, at 2½ and 3l. per cent. at the most.

That all Bills of Exchange be received and paid in Bank.

That the Profits of the Bank go to the good Men that manage the same, in lieu of their great Care and Pains, and defraying Bank Charges, and Officers' Salaries, or so much as shall be thought fitting to be reserved towards the Increase of the Stock; and as the Bank increaseth in Credit, so the Reservation to increase to augment the Stock, but the Stock always to remain whole and intire.

Lambe was satisfied that such a bank would so encourage trade and be so convenient that others would soon be called for at Edinburgh, Dublin, York, Bristol, and Exeter, "for the Furtherance of Trade, by holding Correspondence with each other, than which I do not apprehend or know any way better to equal the *Dutch* in Trade, both at home and abroad."

Next, we have,—

*An Expedient for taking away all Impositions and for Raising a Revenue without Taxes*, by Francis Cradocke. London, 1660. 12 pp. 4to.

Also,

*Wealth Discovered*: Or, an essay upon a late expedient &c., by F. C. London, 1661. pp. viii. 44. 4to.

In the former of these pamphlets, which is addressed to Charles II., the author gives, with little change, the definition of a bank already cited from Lambe, and then states his own plan, which is somewhat elaborated in *Wealth Discovered*. He proposes to divide the kingdom into 100 registry districts, and to make the registration of titles and conveyances of real estate compulsory; then to establish a bank, which shall lend its credit upon deposit of goods or pledge of lands; this credit to be by law "as undeniably current in payment" of debts or for goods as gold or silver, and to be given

out at three per cent.; but money not to be drawn from bank.

Now that such credit is as good as Money will appear, if it is served, that Money itself is nothing else but a kind of security which men receive upon parting with their Commodities, on a ground of credit or assurance that they shall be repayed in some other Commodity: no man would either sell or part with any for the best Money, but hopes thereby to procure some other Commodity or Necessity. (p.

The bank credit, he thinks, will not raise the prices of commodities, for they can be imported, but will raise land and lower interest. Cradocke says that the books which he has seen on banks are Malynes, *Lex Mercatoria*, Lewis Roberts' *Mappe of Commerce*,\* Henry Robertson [sic], *Trade's Increase*,† and Lambe, *Seasonable Observations*. But all these he finds merely encourage imitation of other countries who are proposing increase of revenue, whereas by his bank he computes that the public would gain a revenue upon loans of £730,000 with little expense. He notices Potter, and calls him an ingenious person, and refers to "the shops of *Lothbury Street* (which are banks in effect)." That his bank should be erected without the use of money he finds to be an advantage over gold and silver have their dangers, and so have banks which are based on them, whereas land can be made to a much better use.

In *Wealth Discovered* it is stated that April 12, 1661 Cradocke's plan was referred to the Council for consideration. Added to the Council are Francis Cradocke, William Phillips, George Monk, Samuel Hartlib, Henry Ford, Sir John Leare, Sir William Petty; but the matter appears to have gone no farther.‡

\* Lewis Roberts, *The Merchant's Mappe of Commerce*, wherein the Use and Manner and Matter of Trade is compendiously handled. London, 1638. F

† Henry Robinson, *England's Safety in Trade's Increase*. London 16

‡ In the *Calendar of State Papers, Domestic*, 1661-62, p. 78, under August, 1661, note is made of a brief description by Sir B. Gerbier d'Ormesson "a Bank of Exchange as very beneficial. . . . To make the credit of English merchants equal to that of foreign, there should be a bank, with a large stock of money, and fitting governors, such as to remove all jealousy of its falling into the hands of those who hold the militia, with a coinage of its own, called bank money, and ability to lend on real estate." Sir Balthasar Gerbier probably made this suggestion as the result of his sojourn in the Netherlands during the Common

In a postscript, Cradocke explains to his readers that he is the son, not of Cradocke the preacher to Cromwell, but of another of that name who lived "about seventeen years since" in Somersetshire, near Glastonbury, had an estate of 500*l.* per year, and lost his life in the service of the king. He also makes a reference to his present "short stay in England."

The impression produced by the success of the Bank of Venice appears strongly in the pamphlets of Matthew Lewis, published in 1677 and 1678:—

*Proposals to increase Trade And to Advance his Majestie's Revenue without any hazard or charge to anybody, and with apparent profit to everybody. By M. Lewis. London, printed for Henry Million at the Sign of the Bible in Fleet Street. MDCLXXVII. 16 pp.*

This pamphlet proposes the establishment of an office with warehouses, where advances in bills of credit may be made upon goods for not exceeding twelve months, the bills to be exchanged [discounted?] by the office, if desired, "into Money at four per cent." The example of Venice is more than once referred to; as, *e.g.* (p. 12), "Men desire Credit at Venice (though never answered out of the Bank in specie) rather than Money; because it is more safe and more transferrable than Money." Of the moderate charge to borrowers, the author says that "this is nothing like the borrowing Money to the Scrivener, where the Security is usually sealed at a Tavern, and the Borrower pays the Reckoning."

*Proposals to the King and Parliament how this Tax of one hundred and sixty thousand pounds, per Moneth, may be raised, by a Monethly Tax, for one Year, without any Charge to any particular person, and with great advantage to the whole Nation. This may be done, by setting up Banks here, like the Bank at Venice. By M. Lewis, D.D. London. Printed in the Year 1677. 7 pp. 8vo.*

Of this pamphlet, nearly half is taken up with an account of the Bank of Venice, apparently resting on the authority of "my Intelligencer," but sustainable by "several Venetian Merchants, that have lived many years upon the place, and made it their business to understand the nature and constitution of this Bank, called, *Banco de al gero*; A Bank of transferring Credit."

The writer's plan is that a tax of £160,000 per month should be laid for one year; that banks in every country town should receive the money, and that the tax-payers should receive bills of credit in exchange, these bills to be made current money and Parliament to pledge its faith that money should be raised in specie to answer the bills, "if ever it be desired." The case of Venice is relied upon to show that, while the government could thus have the use of the money obtained by the levy, its credit would be a practical and advantageous substitute, saving the tax-payers from any inconvenience.

In the next year, the indefatigable author produced 11 more pamphlets, of which the first is the best known of the series:—

*Proposals to the King and Parliament, or a large Model of a Bank* Shewing how a Fund of a Bank may be made without much charge or any hazard, that may give out Bills of Credit to a vast extent that all Europe will accept of, rather than Money. Together with some general proposals in order to an Act of Parliament for the establishing this Bank. Also many of the great advantages that will accrue to the Nation, to the Crown, and to the People are mentioned, with an answer to the Objections, that may be made against it. By M. L. D.D. London. Printed for H. M. Million at the sign of the Bible in Fleet Street 1678. pp. 48.

The author here proposes that no payments of 100*l* upward should be good in law, unless made in bank; that the bank should lend upon either personal or real security, should be wary at first in giving out credit except for money, that it should be empowered to buy lands and ships, to sell "a lumber," and to engross the stock of tin and make it money or ingots to be money at the market price. That if security may be had for loans, he proposes that the registration of ships, houses, and lands should be authorized, all reverse claims to be barred, if not brought in within six months after notice given of registration. The advantages of registration are discussed incidentally; and it is complained that estates are settled privately and titles made uncertain, so that land formerly worth twenty years' purchase or more is sold for above sixteen, though interest is at six per cent.

Lewis enlarges on the case of the Bank of Venice, which

says, sprung from the dishonesty of bankers. "The Bankers at Venice did just as our Bankers have done here, they got Men's money into their hands at Interest" and lent it to insolvents or "laid it out in desperate cases as our Bankers did"; they broke and fled from the territories "as ours do into the *King's Bench*." The State therefore set up the bank, which he believes to be "a perfect Credit Bank and its Fund a meer imaginary thing," and yet "credit in Bank is more safe, more portable, and more transferable than money in specie, and so of greater value, as Gold is better than Silver." On the difference in rate between bank credit and currency, both at Venice and Amsterdam, he dwells at some length, returning, however, to the above explanation.

*A Short Model of a Bank* Shewing how a Bank may be erected without much trouble, and without any charge or hazard to any body, and with apparent profit to every body, except Theeves, Brokers, and griping Usurers, which Bank will be able to give out Bills of Credit to a vast extent that all persons will accept of rather than Money. By M. Lewis, D.D. [No place or date.] 8 pp.

This pamphlet refers the reader to "a larger discourse of this Model at Mr. Million's," and then gives a summary as follows:—

The Epitome of this Compendium is, when the Nation is divided into Precincts, erect an Office in each Precinct to return Money.

Order all greater Payments to be made at these Offices, where any person may leave his Money without interest, and take a Bill of Credit for it of the Office, which shall be made transferrable.

That the Bill of Credit may be currant; let the whole Precinct be obliged to make good the acts of their Office, as in case of Robbing.

That the Precinct may not be damnified, let them choose their own Officers, who shall give security to them.

They shall also choose four and twenty substantial persons to meet once a Month to supervise their stated Officers.

These four and twenty shall dispense Money lying dead in the Office, as oft as they please.

Much of the running cash of the Nation will in a little time pass through these offices, and all that can will leave it there, and take a Bill of Credit of the Office: because this Bill of Credit will be more safe, more portable, more transferable, and so of greater value than Money, as Gold is (for these reasons) better than Silver.

Hence these Offices will have a vast Credit, which is equivalent to much Money in specie, and may do whatever any can do, that have an inexhaustible treasure.

To these notes the better known schemes of Briscoe and Chamberlayne are the proper sequel; but it is unnecessary to pursue the subject. Before the close of the seventeenth century, the rise of private banking had done much to clear the public mind, the land bank scheme was sanctioned only in a modified form, and the establishment of the Bank of England had come about as the natural result of experience and the final prevalence of sound ideas.

CHARLES F. DUNN

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#### A LETTER BY HENRY CLAY.

Among the papers of the late Benjamin W. Crowninshield are letters from Henry Clay, one of which we print herewith. Mr. Crowninshield was Secretary of the Navy between 1815 and 1818, and was representative in Congress from the First District of Massachusetts between 1826 and 1831. The letter has been put at our disposal through the courtesy of Benjamin W. Crowninshield, the present representative of the family. It will be seen that it throws light on the political situation in the early part of 1827, and more especially on the part which Clay played in the tariff agitation of that time. In the article on "The Tariff of 1828," which was printed in the *Political Science Quarterly* for March, 1888, it is suggested (at page 28) that the demonstration in favor of higher duties which led to the Harrisburg Convention of 1827 and was an important factor in bringing about the tariff act of 1828, was probably not a political manoeuvre got up by the partisan President John Quincy Adams. This letter turns the probability the other way: it might fairly be inferred from it that the Adams men were stirring up the tariff agitation, and were trying to bring it to bear in favor of their candidate.

(Private.)

WASHINGTON, 18 Mar., 1827

*My dear Sir,*—I was sorry to learn from your favor of the 14th that you are indisposed; and I hope your health will be soon restored. If you will go to my friend Chapman, he will cure you by no other remedy than that of agreeable conversation.

I regret that Mr. Binns\* is not given all the public printing in Philad<sup>a</sup>. But I have done all that I could. With the P. Off. department I cannot interfere, for reasons that must at once strike you. You must address your efforts to the President, to whom I have said all that was proper for me.

I am glad to hear so favorably of Penn<sup>a</sup>. My own information from other quarters corresponds with it. Still, that which has been so long wanted is still wanted,—firmness and boldness to avow opinions which are entertained. That want creates our only danger. I have sketched a plan of co-operation, which I enclose for your consideration.† Be pleased to copy it in a fair hand. If the first movement takes place in Philad<sup>a</sup>, no pains should be spared to make it numerous, reputable, and imposing. Let all persons (friends of D. M. I. I. and the Admin.‡), without regard to party denominations heretofore existing, be brought out. Let Ch. Justice Tilghman or Judge Barnes preside. Get M. Carey to attend. Let the meeting publish an address, well drawn, temperate in language, but firm in purpose, and eloquent and animated in composition. This meeting will form a nucleus.

I do not think that Mr. Binns makes the most of the proceedings in the Virginia legislature ag<sup>t</sup> the American system.§ These sh<sup>d</sup> form a prominent topic in the address and in all friendly papers in Penn<sup>a</sup>. You know, if the present mongrel opposition gets into power, there is an end, at least a suspension, of that system for a long time.

The state of my health, which is not good, will oblige me to travel some this spring and summer. I shall be in Penn<sup>a</sup>, but in what parts and at what times I cannot now say. Let me hear from you.

Your friend,

H. CLAY.

MR. CROWNSHIELD.

\* Binns was editor of the *Democratic Press* of Philadelphia, and tried in vain to induce President Adams to give him spoils. See Sumner's *Life of Jackson*, pp. 112, 113.

† This paper seems to have been lost.

‡ That is, Domestic Manufactures, Internal Improvements, and the Administration.

§ This refers to the resolutions introduced by Mr. Giles in the Virginia legislature and passed early in 1827, protesting against any claim of power by the general government to make internal improvements within the jurisdiction of any State, or to foster domestic manufactures, and also protesting against the tariff act of 1824. See *Niles's Register*, xxxii. 135, 167.

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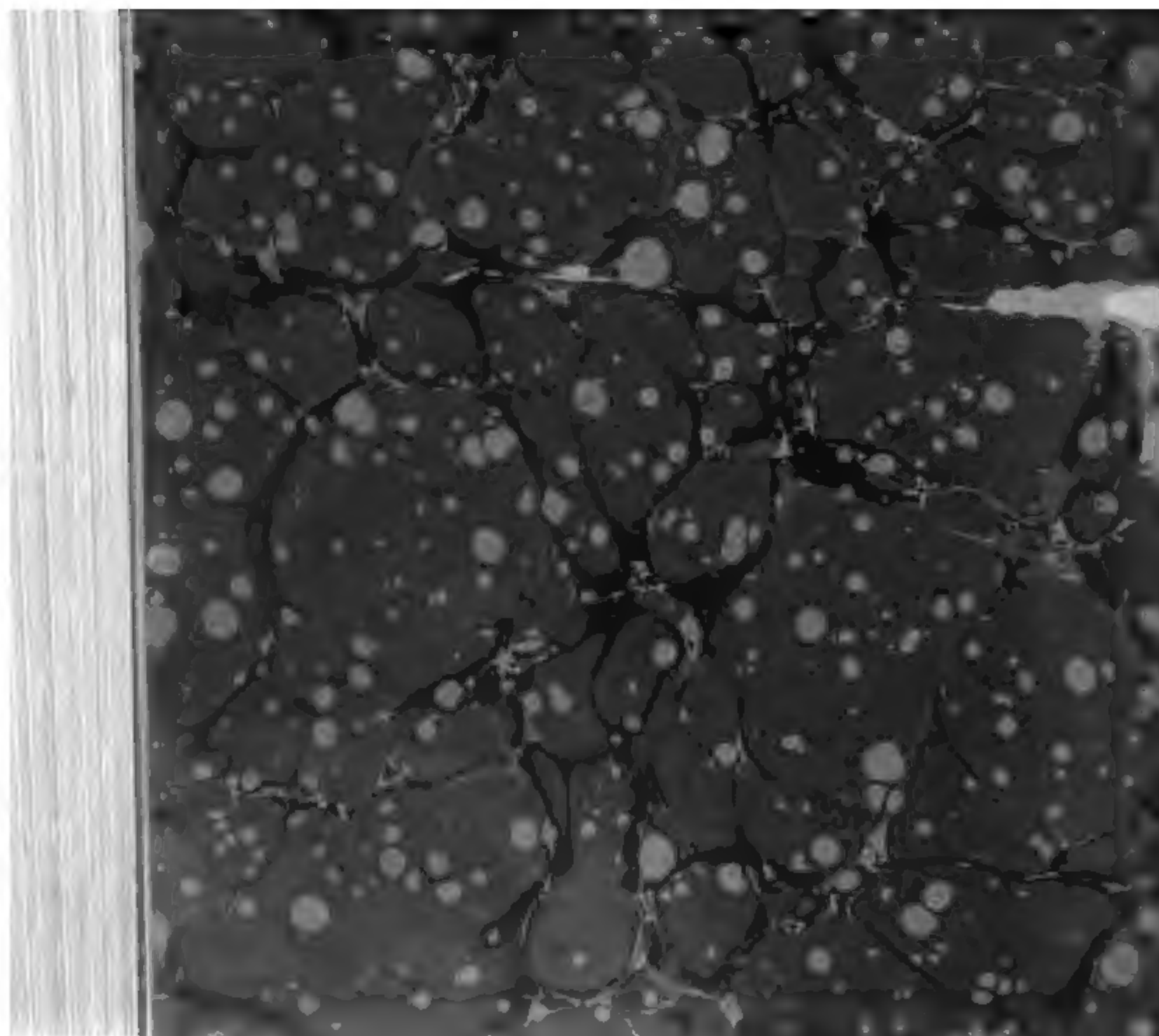


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